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CONTENTS

Notes on Early Agriculture in Scotland[1]

By ROBERT B. K. STEVENSON

THE archaeological evidence for the cultivation of grain in Scotland covers the grain itself, fields, and ploughs, besides grinding-querns which, though frequent, will not be considered now. The pollen from weeds of cultivation may ultimately come to be added.

Hans Helbaek from Denmark has shown from impressions in pottery that barley was already cultivated in neolithic Orkney and Morayshire, and for the early and middle bronze age he got similar evidence from most parts of Scotland except the west Highlands and far north.[2] Wheat, though known in neolithic southern England, does not seem to have been eaten here until Roman times, which was when oats began to be cultivated in Britain.

Since Helbaek's study was published a heap of 28 lb. of carbonized barley has been found by C. S. T. Calder at Gruting in Shetland. It contained three times as much of the naked form as of the hulled, and was built into the wall of a house of the local stone age, probably corresponding to the end of the British early bronze age.[3] Similar houses have been found in recent years in some quantity in various parts of Shetland, and often in places where the moorland seems to have been uninhabited ever since, except for sporadic iron-age squatting in the house sites; so that the numerous low clearance heaps of stones and the remains of field dykes that surround individual houses, or scattered groups of houses, are likely to be contemporary with them, about the middle of the second millennium B.C.[4]

The fields, according to Calder, are usually curvilinear in outline, and range from a single enclosure to half a dozen or so. In size they vary from about 60 to 260 feet across. The clearance heaps are found both inside and outside the enclosures, which may have kept the flocks and herds from the crops—bones of sheep and small cattle have been found in the houses.

Angus Graham has recently studied a number of 'cairnfields' of uncertain date in other parts of Scotland, which he concludes are mainly clearance heaps although traces of associated field boundaries are scanty.[5] For one site in Morayshire he concluded that the cairns were numerous enough to have

[1] Read at the Conference on Scottish Agricultural History in Edinburgh, 26 September 1959.

[2] With Knud Jessen in *Kong. Danske Videns. Selskab* (*Biol. Skrift.* III), 1944; cf. *Proc. Prehist. Soc.*, 1952, pp. 194 ff.

[3] *Proc. Soc. Ant. Scot.*, 1955–6, p. 353.

[4] *Ibid.*, pp. 357 ff.

[5] *Ibid.*, 1956–7, pp. 7–23.

prevented the use of a plough drawn by animals, and if they were in fact the result of land clearance it was for manual cultivation.

Some confirmation for the early date of the Shetland fields may be got on the top of a hill near Lerwick (Hill of Shurton), where at the base of deep blanket peat there are the stumps of a dyke that had almost entirely gone before the peat covered it.

The scarcity of hard wood in Shetland, where drift spruce was used as timber,[1] may account for hundreds of enigmatic stone implements that are almost peculiar to the islands, though a few are known also from Orkney. In particular there is one relatively scarce type: stone bars two or three feet long or more, though generally only broken tips two to three inches thick, have been collected.[2] These bars are rough, but worn smooth at one side of the tip only, and this localized wear could be explained if such a bar were put in the place of the wooden fore-share of an early northern European plough, one that has developed just beyond the simplest plough which has no fore-share and which continental writers call the 'crook-ard'.

The idea of a stone share is not entirely extravagant, as they have been occasionally recorded in modern times, and neolithic stone shares—quite different indeed from the possible Shetland ones—have been convincingly demonstrated from central Europe.[3]

A more developed type of plough is known to have been used in Denmark in the iron age and probably already in the late bronze age. Its massive curved beam is perforated at one end to receive a stilt, ploughshare, and fore-share, all of separate pieces of wood.[4] This 'bow-ard' is known in Britain from two finds in south-west Scotland: a typical beam from near Lochmaben, Dumfriesshire, undated;[5] and a one-piece plough-head and stilt from under the floor in a round-house or crannog in Milton Loch, Kirkcudbrightshire, occupied in the second century A.D.[6] A triangular share will have been attached to the similarly shaped head, which is slotted to receive it.

Another type of plough reached south-east England at the time of the Roman conquest or just before. It was fitted with an iron share and possibly normally with a coulter. Four iron objects found in Romano-British contexts in south-east Scotland have been assigned by F. G. Payne to such ploughs.[7] But this should not be accepted as quite certain, for none is entirely like the specimens he illustrates from England, and three have a widening of the

[1] *Archaeol. News Letter*, IV, 1952, pp. 133–7. [2] *Proc. Soc. Ant. Scot.*, 1955–6, p. 396.
[3] P. V. Glob, *Ard og Plov*, 1951, pp. 124 ff.; *Germania*, 1956, pp. 144–7.
[4] Glob, *op. cit.*, pp. 113 ff. [5] *A. H. R.*, V, 1957, p. 76.
[6] *Proc. Soc. Ant. Scot.*, 1952–3, pp. 143–4.
[7] *Archaeological Journal*, CIV, 1947, p. 111 and Fig. 1.

blade beyond the socket that is exactly like the shape of a winged peat-spade included in one of the hoards of iron scrap to which belong another of these possible shares and the fourth dissimilar one.[1] The three objects may, then, be evidence of narrow-blade spades rather than of ploughing. If they are shares, however, they imply according to Payne a horizontal share undermining and turning a furrow, in contrast to the high angle of penetration of the Milton Loch plough.

However, on Danish analogy,[2] even the latter could have been tilted to the right during ploughing so that the arrow-shaped share turned the greater part of the soil to one side; only the earliest 'crook-ards', and with them the Shetland stone shares if that is what they are, scratched or hoed the soil without turning it.

The square iron-age (so-called Celtic) type of field known in southern England is not known in Scotland: that once claimed near Galashiels is not now accepted.[3] A field system possibly of the Roman period exists however in Glenrath, Manor parish near Peebles.[4] Low stone dykes or heaps run downhill from a series of enclosures some of which are single small huts within courtyards. There are clearance heaps in the fields thus bounded.

Payne, considering in this REVIEW the evidence from shares and coulters that implied the existence of mould-board ploughs in at least late Roman Britain, drew attention to ploughs whose soles are protected on the land-side (left side) by a series of wearing stones driven into holes bored in the wood.[5] Three ancient wooden soles with such pebbles have been found in Denmark, with evidence for mould-board attachments. The early iron-age date once assigned to them now seems very unlikely, and Glob dates them to the end of the Danish iron age, that is to say not long before Viking times. The use of such protective pebbles is known from nineteenth-century wheeled ploughs, and the ancient ploughs in question may similarly have had wheels.[6]

Pebbles of quartzite that are undoubtedly from similar ploughs have been found in Britain. In particular the National Museum of Antiquities has examples from a number of places in south-east Scotland, also from Bute in the west, and, very recently recognized, several from Jarlshof in Shetland. The latter include the only find with a datable context of any kind, one from

[1] *Proc. Soc. Ant. Scot.*, 1931–2, Fig. 22: 59, 62; and 1952–3, p. 47 where it is suggested that the peat spade is intrusive; but the state of preservation and similarity to the supposed shares argue for true association.

[2] Glob, *op. cit.*, p. 114.

[3] *Proc. Soc. Ant. Scot.*, 1950–1, p. 94.

[4] *Ibid.*, 1940–1, pp. 109 ff.

[5] *A. H. R.*, v, 1957, p. 78.

[6] Glob, *op. cit.*, pp. 12 and 121 ff.

a twelfth-century Norse outhouse.[1] It may be suggested that the pebble-shod plough came over with the Danish invaders who conquered Northumbria in the ninth century and spread to Norse parts of the country also. In England Payne knows of pebbles from Yorkshire and Lincolnshire.

Ploughs with movable mould-boards and movable coulters which allowed the furrow to be turned to right or left—the so-called one-way ploughs—apparently go back in Britain to Roman times, and Payne in his earlier paper overturned previous ideas about the relationship between ploughs and field shape, and the supposed contrast between Celtic light ploughs and heavy Anglo-Saxon ploughs.[2] The extent to which wheels were used in Roman or later times is, it seems, far from a solved problem.

All of which leaves in doubt the date and reason for the introduction of horizontally terraced fields, such as in Scotland are mainly known in the south-east—as far as Graham's researches went just before the war.[3] It seems likely, however, that they are medieval in date. On Arthur's Seat in Edinburgh they are contemporary with a type of farm not yet properly explored, that consists of oval enclosures containing curvilinear structures.[4] Such homesteads appear, in parts of Dumfriesshire and Peeblesshire, to be the direct predecessor of the modern farmsteads that are sited downhill from them, but they also represent smaller sub-divisions of land.[5]

On Arthur's Seat and elsewhere the horizontal terraced fields were superseded by vertical rigs, a process probably completed by the seventeenth century. The purpose of raised rigs and their curvature has been much written about. Here in Scotland at least they seem with few exceptions to run up and down the slopes, and there can be little doubt that prior to field drains the ridges and the furrows between them were intended as a drainage system. The contrast with terraces which retain water could hardly be greater, and the change from one to the other must represent a more fundamental change of intention than has generally been supposed.

[1] *Proc. Soc. Ant. Scot.*, 1935–6, p. 265 and Fig. 15; J. R. C. Hamilton, *Excavations at Jarlshof*, 1956, p. 173.
[2] *Archaeological Journal, loc. cit.* [3] *Proc. Soc. Ant. Scot.*, 1938–9, pp. 289–315.
[4] *Ibid.*, 1946–7, pp. 160 ff. [5] *Ibid.*, 1940–1, pp. 92 ff.

Eighteenth-Century Changes in Hampshire Chalkland Farming

By E. L. JONES

THE past farming systems of light-soiled districts are often described as 'sheep-and-corn'. The term does not reveal the changes which took place at various times in the exact objects of sheep and grain production and in the relative importance of the two groups of products. This paper describes some agricultural developments in the Hampshire Chalklands, traditionally a 'sheep-and-corn' area, in order to show how greatly the emphasis on certain products changed between the early eighteenth and early nineteenth centuries. The evidence so far available permits no final conclusions on the evolution of Chalkland agriculture, but the sequence suggested here may provide a framework for more exhaustive studies, and should stress the inadequacy of 'sheep-and-corn' for describing farming systems which changed in essentials over time.

The early decades of the eighteenth century may only be taken as the base period for a discussion of the whole century if it is recognized that they themselves were times of agricultural transition. In the Hampshire Chalklands the agricultural advances of the late seventeenth and early eighteenth centuries were towards increasing the supplies of sheep feed. The greater provision of artificial fodder crops and irrigated grass for the flock made the cultivation of more and more sheep-walks possible, and this continued during the late eighteenth century under the impetus of rising prices for grain. The increase of fodder supplies, the extension of tillage, and the changes in farm production and costs which they helped to bring about are considered here.

I

The sheep flock was the pivot of Chalkland husbandry. From the later seventeenth century demand for local wool was falling, but ewe flocks remained of central importance for breeding stores and fertilizing the ploughland. The large, lanky, downland sheep were admirably suited to a routine in which daylight was spent grazing the downs and darkness folding on the arable. On the other hand they gave only a small fleece, although of good quality, and the culled ewes fattened only slowly.[1] The grassland flocks were

[1] Edward Lisle, who farmed at Crux Easton from 1693 or 1694 until 1722, did not regard Hampshire Chalkland sheep as abundant wool bearers, and contemporary farm accounts record less valuable sales of wool than of sheep on the hoof.—E. Lisle, *Observations in Husbandry*, 1757, *passim*; Farming and Domestic Account Book for Property at Compton and

limited in size by the shortage of fodder in winter and at lambing. Supplementary supplies would mean that more sheep could be stocked; these in turn would promote higher crop yields and permit the permanent cultivation of the thinner chalk soils.

These desiderata became attainable from the latter half of the seventeenth century with the spread of water meadows and 'new' crops. In 1669 John Worlidge of Petersfield recommended sowing turnips and "several new Species of Hay or Grass," and floating water meadows.[1] Thirty years later sainfoin, ryegrass, clover, and turnips had been established widely, as the work of Edward Lisle clearly reveals.[2] These crops alone, however, were of great but not inestimable importance, as was emphasized by Lisle's difficulties in overwintering cattle on the high downs.[3] At Crux Easton even sheep pressed hard on resources of fodder. "It is a hard matter," lamented the would-be grazier, "tho' one have a good stock of that grass, to get the shepherd's leave to hayn it from the sheep for that end [to feed cattle], he stands so much in need of the hop-clover grass from the middle of March to the beginning of May."[4] Lisle was unfortunate in that Crux Easton lies far from a river valley. In the common type of Chalkland parish abutting on to a stream forced grass from floated meadows was at this time being added to the 'new' crops, effecting an unprecedented improvement in the fodder situation.

It has been stated that "during the eighteenth century in particular, water-meadows must have been pushed to the limits of areas where it was possible to construct them."[5] This accords with the visible remains of irrigation systems on the valley bottoms and with contemporary documents. For instance, on the Compton reaches of the Test payments for irrigation are recorded from 1714, when it was patently routine and had induced three men to specialize in the work; they charged by the acre for drowning meadows and piece rates for such tasks as "Shutting y^{e} hatches Down."[6] In the Park meadows fifty-one acres were drowned regularly. These meadows were maintained partly for dairy cattle, and in accordance with local practice herds

Somborne, H[ampshire] R[ecord] O[ffice]: 2M37/148; Accounts of Mr Rumbold's executors 1707–21, HRO: 2M37/153. The sale of stores is stressed in Defoe's *Tour* of 1724, Everyman edition, p. 289.

[1] J. Worlidge, *Systema Agriculturae*, 1681 (first edn., 1669), pp. 11, 17, 46.

[2] Lisle, *op. cit.*, *passim*. (Contemporary farm accounts refer to Rye Grass, Sainfoin, Hop Clover, and Broad Clover.—HRO: 2M37/148, 153.)

[3] *Ibid.*, pp. 229–33, 263. [4] *Ibid.*, p. 217.

[5] H. P. Moon & F. H. W. Green, *Land Utilisation Survey*, Hampshire, ed. L. D. Stamp, 1940, p. 377.

[6] HRO: 2M37/148, 149, 150.

and pasture rights were let annually at Pittleworth, Compton, and Brook. Sheep were also kept and other flocks agisted for the lambing season. Despite some use for dairying (later in the century possibly releasing some parish cow downs for tillage) the improvement of sheep husbandry was doubtless the main aim in watering meadows.[1]

Incidental light on the extent of water meadows in the mid-Test valley is shed by the proprietors' disputes with a downstream miller. In 1713 thirty-eight acres of Pittleworth Farm were watered, while in 1743 "Mr Gatehouse waters by his carryage that has been cut time out of mind, flood mead about 35 Acres he waters by the carryer that has been cut about 30 Years, about 30 Acres he waters by Sir William's Wire [weir] about 13 Acres, & carry the Waters intirely from Mottisfont Mill."[2]

On the Itchen there were attempts to float common meadows, the improvement of which presumably tended to lag behind that of meadows belonging to single proprietors. In 1704 a contractor was required to water Otterbourne common meadow for the mutual benefit of the proprietors through "the greatest Increase of Grass & Hay as the sd Land is Capable of in respect of the Sd improvement by watering."[3] This scheme failed, for the meadow became badly flooded from the attempted Itchen Navigation. From 1724 John White, Sir William Heathcote's agent, took an interest in the problem and by 1731 had secured the proprietors' assent to a scheme for which he had prepared estimates: "it is to be considered, that it must be first layn dry, & afterwards improved by drowning." That year a surveyor began work and thenceforth annual levies were raised to meet the cost of improvement, but the physical difficulties were not overcome. By 1740 the meadow "hath for some time Past been overflowed with Water and lain in a Ruinous Condition," and in 1746 another estimate for draining, partly by "Lowering the Carryage," was submitted. John White also suggested watering forty acres of common meadow at Compton on the Itchen in 1728. This was successful; his proposal is endorsed in another hand, "NB the pasture ground was watered, in the year 1730 & it proved beyond expectation."[4]

[1] Incidental advantages of water meadows included the control of drainage, which lessened the risk of sheep-rot, and the release of a surplus of hay for sale.—Papers relating to Pittleworth Farm, HRO: 18M54/Box G, pkts. A, C; Edwards's Collection: Farm Accounts, HRO: 2M37/148–53.

[2] HRO: 2M37/149. See also Papers relating to watering of meadows of Pittleworth and mill at Mottisfont, HRO: 18M54/Box G.B., 1–10, and Particulars of Pittleworth Farm, HRO: 18M54/Box G.C., 12.

[3] Draft Articles of Agreement, HRO: 18M54/I pkt. 1. Subsequent schemes are detailed in the same bundle.

[4] Documents relating to Compton Estate, HRO: 18M54/1 pkt. F, No. 1.

The examples given, which might be extended, indicate the scale on which meadows were floated. The expenditure and exertion involved suggest the large return expected and further that there was no cessation of 'improving' activity during the depression of 1730–50. Floated meadows, Dr Kerridge concludes, "made possible earlier lambing and increased sheep stocking, ensured a supply of hay in drought, and by integration with the sheep-and-corn husbandry of the district, promoted increased yields of corn, especially of barley, thus constituting an improvement of the first order."[1]

II

The improved fodder supplies made possible the folding and thus the cultivation of thinner soils, this being "the feature that impressed most travellers" in the Chalklands in the late seventeenth and early eighteenth centuries.[2] In 1724, for example, Defoe noted the recent extension of tillage by the sheep-fold system on the chalk of Hampshire, Wiltshire, and Dorset. Although he observed prodigious sheep-flocks it was already apparent that "the number of sheep fed on these downs is lessened, rather than increased, because of the many thousand acres of the carpet ground being, of late years, turned into arable land, and sowed with wheat."[3] Lisle was interested in the costs of cultivating marginal soils, and recommended "gentlemen who have great downs, to plough a furrow across them in some places, that they may turn the best of such lands into arable."[4]

Incentive for the general cultivation of downland was nevertheless lacking before mid-century. Until then a farming system was evolving in which the degree of sheep-folding dictated the relatively slow rate at which fresh land could be brought and kept under the plough. With the lessening return to wool production, sheep became increasingly the tools of arable husbandry. Water meadows and 'new' crops provided the means of multiplying the tools. The inextricable bond between the folding flock and grain production was thus explained to Lisle by Mr Hawkins, "the great Hampshire farmer": "If a bane fell on sheep, corn would be dear, because there could not be a fifth part of the folding that otherwise there would be, and consequently a deficiency of the crop."[5]

The integral rôle of the sheep-fold in the production of the cash crops, wheat and barley, was accentuated during the depression of 1730–50. This

[1] E. Kerridge, 'The Sheepfold in Wiltshire and the Floating of Water-meadows', *Econ. Hist. Rev.*, Ser. 2, VI, 1954, p. 289.

[2] A. H. Fry, *Land Utilisation Survey*, Wiltshire, ed. L. D. Stamp, 1940, p. 236.

[3] D. Defoe, *Tours*, Everyman edn., I, p. 282; see also pp. 187, 285.

[4] Lisle, *op. cit.*, pp. 3–4, 266. [5] *Ibid.*, p. 430.

depression has been described by Dr Mingay from the rentals of the duke of Kingston.[1] An examination of the rentals for Broughton Manor, part of the only Kingston estate containing Hampshire lands, between 1722 and '39, supports the general thesis.[2] Arrears occurred in 1728 and in all years from 1730, by far the heaviest in those ending at Michaelmas 1735 and '37. Yet in those years there were estate outgoings which cannot be attributed entirely to the landlord's desire to prevent farms falling into hand. Forty pounds were "Allowed towards building a New Rickhouse 1738 as per Agreement on Farmer Morgans taking an advanced Rent," and elsewhere smaller sums were spent on improvements, notably in 1735 and '36 on breaking up Broughton Common Down.

During this depression there were other attempts to increase production. The floating of some water meadows has been noticed. In 1745 a Stoke Charity farmer whose affairs were in straits considered planting 500 acres of 'Cinque Foyle' and the quite exceptional area of 100 acres of hops.[3] Some sheep stints (but not those of great cattle) were raised far beyond the accepted carrying capacity of the common downs. For instance, Barton Farm, Weston Patrick, carried a stint of 160 sheep on Broad Down from 1719, but a 'concealed' increase in folding was achieved by temporarily reducing the farm's acreage, between 1733 and '47, from sixty to forty-five acres.[4] At King's Somborne the Court Baron raised the long-standing stint of forty sheep per yardland to forty-four in April and fifty-two in October 1735. This was reduced to fifty in May 1736, but the level of forty was not regained until 1741.[5] This abrupt raising of stints acknowledged the vital influence of the flock on the harvest, perhaps of wool as well as of grain, since the prices of both were low in the 1730's. It is possible that all these examples were attempts to combat ruinously low prices by increasing production. The response of the supply curve of aggregate agricultural output to falling demand is slow even today. In the first half of the eighteenth century labour would account for the largest share of farm production costs; it would be

[1] G. E. Mingay, 'The Agricultural Depression, 1730–50', *Econ. Hist. Rev.*, Ser. 2, VIII, 1955, pp. 323–38.

[2] Nottingham University Archives, Manvers Collection, Rentals 4344–48; 4509–48. The bad years in the Hampshire Chalkland may be extended until at least 1747. For a large farmer at Compton 1744 was the worst year in the period 1744–60, and the Rector of Compton abated the tithes, "in consideration of y^e^ bad Season & cheapness of corn." See J. S. Drew, *Compton, near Winchester*, 1939, p. 120.

[3] Papers relating to tenancy of Hants manor of Stoke Charity, HRO: 18M54/Box E, pkt. A.

[4] Bolton Collection: Leases for Barton Farm, Weston Patrick, HRO: 11M49/447.

[5] Extracts from presentments to Court Baron of King's Somborne concerning stints per yardland, 1724–50, HRO: 2M37/208; Miscellaneous Papers relating to Brook, Eldon, etc., c. 1750–1800, HRO: 2M37/127.

largely family labour, the 'opportunity costs' of which would be effectively nil in times of depression and unemployment. As purchased inputs would be few, and in any case cheaper at such times, and as fundamental shifts in demand might be masked at first by unfavourable weather, efforts to offset lower prices by actually expanding output might not have seemed irrational.[1]

At the end of the eighteenth century agriculturists still claimed to be convinced of the necessity of the sheep-fold. Much of this acclaim was retrospective and was prompted by the decline in the old folding system brought about by the vast conversion of sheep-walk to tillage. This extension of cultivation was the result of private rather than parliamentary enclosure. Of the total county area only 6 per cent was affected by Acts enclosing open field and only a further 5 per cent by those concerning the 'waste'.[2]

The aim of those who financed parliamentary enclosure in chalk Hampshire was less the taking-in of new ploughland than the creation of compact and private holdings from common field strips. On this the Articles of Agreement for an enclosure in the Chalkland edge parish of East Dean in 1809 are especially clear. "The Parts and Pieces of Individuals in the . . . Fields lye so dispersed & intermixed with the lands of others as not only to render the same inconvenient to the sev.Prop^{rs} & Occupiers thō^{f} but Detrimental to good Husbandry & in their present Situation are incapable of any Improvem^{t} & there are also within the s^{d} Parish of East Dean some old Inclosures & the dividing & lay^{g} the Old Inclosures near would be a considerable Advantage to all the Proprietors interested therein."[3] The proprietors at another enclosure went so far as to enter into a bond for £200 to allot one of their number his new enclosure next to his existing closes.[4]

On the enlarged and private farms which parliamentary enclosure thus tended to form the trends of the market for farm products could be followed more nearly than on the jumbles of closes and open-field strips which they superseded. In the late eighteenth century this implied a shift towards grain production, as Arthur Young's 'Minutes of Inclosures' in Hampshire suggest. After the enclosure at Monk Sherborne Young noted, "Corn. Has not increased much," whereas sheep had decreased. At Up Nately corn had increased while sheep had merely "not lessened," and at Basingstoke corn had "Very greatly increased," but sheep, Young was obliged to hedge, "The

[1] Cf. J. K. Galbraith and J. D. Black, 'The Maintenance of Agricultural Production during depression: the explanations reviewed', *Journ. Polit. Econ.*, XLVI, 1938, pp. 305–22, and D. E. Hathaway, 'Agriculture in an Unstable Economy Revisited', *Journ. Farm Econs.*, XLI, 1959, pp. 487–99.

[2] W. E. Tate, 'Field Systems and Enclosures in Hampshire', *Papers & Proc. Hants. Field Club*, XVI, 1947, p. 263, agreeing with estimates by Prof. Gonner and Dr Slater.

[3] HRO: 12M37/555. [4] Enclosure at Binley, St Mary Bourne, 1743, HRO: 3M54/1.

number, probably, lessened; but the produce in value being so, is questionable."[1]

The effects of parliamentary enclosure on agricultural production were therefore of a similar quality to those of the contemporaneous private enclosure of sheep-walk. It is, however, in the latter, affecting so much greater an area, that the major changes of the century must be sought. Nevertheless, the numbers of Enclosure Acts do provide a rough index to the rate of all enclosure, for some downland was included in many Acts aimed more specifically at open-field. Under the same market influences a broadly similar rate of progress must be assumed for public and private enclosure, although difficulties of administration probably retarded the former a little by comparison. The increase of enclosure is shown by the passing of nine Acts relating to parishes wholly or partly on the chalk from 1709 to 1773 inclusive, fourteen from 1774 to 1792, and twenty-five from 1793 to 1815. This acceleration is not altered by the inclusion of formal private enclosure agreements. The ultimate direction of the movement is evident in that five of the eight Acts passed in 1809–12 dealt exclusively with the 'waste'.

The crucial importance of the large-scale cultivation of sheep-down hinged on the land-utilization balance of many Chalkland parishes and farms. Like the attenuated parishes, many farms held in severalty stretched from narrow valley to untilled hill pasture. It was "the favourite idea among the down farmers, that no farm can be advantageously disposed for the general circumstances of that country, unless it has water-meadow at one end, and maiden down at the other."[2] This ideal balance was to be upset, as the profitability of grain farming grew, by the piecemeal conversion of sheep-down to tillage on individual farms. The shift is symbolized on Lord Bolton's estates by the contrast between 1660, when permission was granted to make a rabbit warren, and some year between 1783 and 1799, when a 285-acre warren was destroyed to make an arable farm.[3] Enclosure of downland for permanent arable cultivation was taking place in the late seventeenth century,[4] more rapidly from the mid-eighteenth, and fastest during the Napoleonic wars. Enclosure for other purposes—to carve pasture from the Clay-with-Flints scrub which was nearest to true waste, to protect coppice, or to impark—was by comparison insignificant.

Compared with the evidence for parliamentary enclosure, that for the en-

[1] *Annals of Agriculture*, XLIV, 1806, pp. 427–8.

[2] C. Vancouver, *General View of the Agriculture of Hampshire*, 1810, p. 78.

[3] Nether Wallop Estate Papers, HRO: 11M49/466; Register of Copyhold Leases, 11M49/85.

[4] e.g. at Chilbolton and Shipton Bellinger, F. R. Goodman, *Reverend Landlords and their Tenants*, 1930, pp. 38–9.

closure and cultivation of downland is fragmentary, but its sum is impressive. The commonest clues are incidental notes that certain parcels of arable were formerly downland, for example, "2 acres of arable at Old Down,"[1] or "New Down—arable,"[2] or "The two(?) meadows... That next Stockbridge is now plowed."[3] Isolated references in modern works are not infrequent, for instance to the "field, known as Breachfield, situated on a hill about a quarter of a mile north-east of the village of St Mary Bourne; the field having formed part of Eggbury down till 1772, when it was broken up."[4] This example shows the elements of the process—the first cultivation of an elevated down in the late eighteenth century giving rise to a field-name typically associated with the ploughing of virgin land. A complete survey of literary evidence would be a considerable task, although a useful chronology of the movement might be obtained by its collection for selected groups of parishes.[5] To demonstrate the occurrence of the process in the eighteenth century ample references are to be found in leases, farm accounts, and estate records. Leases are especially useful. They may reveal indirectly the spread of cultivation, as at Hurstbourne Tarrant, where four hundred acres of woodland and a similar acreage of furze and heath were tilled between 1778 and 1816. Alternatively, they may specify parcels of sheep-down which tenants might plough without penalty—e.g. part of Northbrook Down, Micheldever, in 1737, common down attached to Compton Farm in 1745, and forty acres of Pearch Down, Kingsclere, in 1809.[6]

Actual proposals and agreements to break up downland are direct evidence. An incomplete, probably late seventeenth-century, paper endorsed "Nether Wallop—about breaking up th Downs," states that "The Tenants of Wallop would break up 50(½?) acres of the Downs & pay my Lord an acknoledgemt for it, it is the Course pt of the Down lying beyond the Salsbury road other lords doe permit the same thing & have some..."[7] A 1740 proposal "relating to the breaking up & inclosing part of Compton Down" concerns four hundred acres leased by various persons from the Dean and Chapter of Winchester, who asked £1 per acre to license tillage. At this

[1] Lease of lands at Broughton, 1773, HRO: 2M37/358.

[2] Noted on a parcel of 165 acres, surrounded by downland, on a map of allotments to heiresses of Roake Manor, Broughton, in the possession of Rev. R. E. Langdon.

[3] Note of letting a down, 1755, HRO: 2M37/150.

[4] K. E. Innes, *Hampshire Pilgrimages*, 1948, p. 42.

[5] Downland in the Hampshire Chalkland is at present being plotted from early nineteenth-century maps by Mr M. C. Naish at University College, London.

[6] HRO: 2M37/Hurstbourne Tarrant, 28, 62; 2M37/53; 2M37/93; Southampton University Library, Abstracts of Torr & Co. leases.

[7] Nether Wallop Estate Papers, HRO: 11M49/466.

price the Compton tenants were licensed in 1741, when they also agreed to enclose the common fields, "to burn, bake, plough, and convert to tillage 21 acres of downland." The new fields were called 'Bakelands'.[1]

A detailed scheme for cultivating sheep-downs on Chalton Manor was advanced in 1756.[2] The duke of Beaufort's tenants at Blendworth petitioned for further licence to plough Blendworth Down, on which they claimed "an immemorial customary Stinted Right of Common of Sheep," for 742 animals on 304 acres. Permission was requested to cultivate 209 acres; the remaining 95 acres were hangers, the steepest slopes, which the margin of cultivation had not reached, and were deliberately excepted. Agreement was forthcoming. Of the tenants on the manor, those at Catherington and Blendworth who had "lately" received licence to break up common downs were to be indulged in a forty-two-year repetition. Tenants at Clanville and Chalton were to be granted similar rights if they desired them—at Clanville for 400 acres and at Chalton, "such a Quantity as they shall judge convenient and beneficial to be broke up." This points to the final approval of permanent cultivation after a trial period, and shows the tenantry unanimously willing to sacrifice grazing rights to the plough in a year when wheat prices were rising steeply.

The inducement to sow wheat on maiden downland was considerable, despite the high initial cost of paring and burning the sward. No reliable yield figures are available, but crops were certainly far above the average on the chalk hills at first, although dropping subsequently. All the signs point to an expansion of the arable acreage in this way as the eighteenth century advanced. It is not suggested that this took the form of a smooth upward curve, but much detailed evidence is required before short-term variations in the rate of progress are distinguished.

[1] HRO: 18M54/F.1 and Box H, pkt. F, No. 15. See also J. S. Drew, *Compton, near Winchester*, 1939, p. 119.

[2] HRO: Chalton Manor Estate, Box 2/3, 4, 5. Dr Joan Thirsk informs me that she has found instances elsewhere of the temporary cultivation of common pastureland by agreement between manorial lords and their tenants. Dr Thirsk refers particularly to an agreement in the 1670's between the lord of the manor of Penkridge, Staffs., and his tenants for the tenants to plough a part of the common for five years and then allow it to revert (Staffs. Record Office, D260, 8, 1), and quotes R. Lowe, *General View, Notts.*, 1794, p. 9: "it has been besides an immemorial custom for the inhabitants of townships to take up breaks, or temporary enclosures of . . . perhaps from 40 to 250 acres, and keep them in tillage for 5–6 years." Cf. also H. P. R. Finberg, *Tavistock Abbey*, 1951, pp. 32–5, 105. The Hampshire agreements, Dr Thirsk suggests, may refer to the continuation of this practice into permanent cultivation. The introduction of turnips, clover, and other green crops made permanent cultivation of the poorer downland possible. See J. Worlidge's letter of 1682 in J. Houghton, *Husbandry and Trade Improv'd*, 1728 edn., IV, pp. 141–4.

So marked a shift in the balance of land utilization had serious repercussions throughout the farm economy. The especial fears of contemporaries were that successive grain crops would exhaust the poorer soils and that the shrinkage of downland would mean fewer sheep to be folded on a growing arable acreage. The former apprehension proved in the event unjustified, but the literature to which it gave rise indicates the new emphasis on grain production. This swing to arable farming may be related reasonably to the late eighteenth-century rise in the price for wheat, since wheat was usually the first and often the subsequent crop on freshly broken land. Provident farmers followed with barley, oats, and two seasons' ryegrass before reverting to wheat, but opportunists sowed as many 'white straw' crops as the land would bear. Particularly during the Napoleonic wars, wheat prices were sufficiently high to induce the most cautious to crop hard and to encourage the profiteering, the reckless, or those whose tenancies were running out to take all from the land. This was reflected in the contemporary concern, although there is no evidence of widespread or persisting soil-exhaustion. Temporary local conditions made the threat seem real, and even Young, who approved the cultivation of downland, was angered by fields reduced to "a wretched state," where, tempted by "a great sudden fertility" to be "bad farmers for present profit," some "bad managers have, on first breaking up the down, taken more than three crops, sowing as long as the land would yield."[1]

As grain prices soared, so observers became more disquieted. An estate agent noted of New Down Farm at Stratton in 1799, "the tenant is too much disposed to sow the land in a greater proportion than it ought to be; it would pay her better if less of the Down land were in tillage and more of the poorest parts of the farm either in sainfoin or laid down with artificial grasses. Some limit to the cropping upon this estate in general, as well as here, would be highly proper and useful."[2] Another agent, valuing Gerrard's Farm, Nether Wallop, in 1803, claimed that it had been "like most others in that country... rather improperly treated by the practice of burning the Land, and sowing too many Crops in succession." He considered much of the farm's down too shallow to sustain burning and cropping, which was "only a present advantage, with certain ruin in future."[3] By 1810 Charles Vancouver, the Board of Agriculture surveyor, was outspokenly criticizing the "madness, extravagance, and folly" of all who broke up downland.[4]

[1] See *Annals of Agriculture*, XXXIII, 1795, and 'postscript' to A. & W. Driver, *General View of the Agriculture of Hampshire*, 1794.

[2] A. B. Milner, *History of Micheldever*, 1924, p. 245.

[3] Valuations, HRO: 33M57/154 and 156/6, 8.

[4] Vancouver, *op. cit.*, pp. 55, 58, 78, 80.

Nevertheless, the more extensive system of grain-growing spread. It was made possible by the use of various rotations akin to the Norfolk four-course and by resting the land with sainfoin and clover leys. Buildings for threshing and manure storing were erected at the down ends of the elongated farms, thus saving journeys from the main farmstead by labourers and by the flock, which could be concentrated to fold the better 'home' arable.[1] Ultimately, the success of the general cultivation of the downs was sealed by establishing on them entirely new farms, named Down or Warren or New Barn. The physical enclosure of the downs, albeit in huge fields, by quickset hawthorn hedges and beech shelter-belts marks this agricultural expansion as a most significant stage in the development of the Chalkland landscape.

III

The other fear provoked by the extension of tillage—a decreased number of folding sheep—was better founded. Awareness of the trend was shown in a query circulated in 1785 by the Odiham Agricultural Society, asking anxiously or hopefully, "How far can a Tillage System by means of artificial Grasses and Roots be made to support a Flock without natural Pastures or Sheep-Walk?"[2] Another sign of the growing need for an alternative to natural pasture may be seen in the 'boom' in water-meadow construction between 1780 and 1830.[3] It might be expected that turnips and ley grasses would have offset the shrinkage of downland, but in practice they did not completely compensate. Sheep had been fattened on turnips for the London market well before the improvement in the Southdown and other mutton breeds, but the old breeds were nevertheless primarily grassland animals. The numerical drop in these sheep has been overlooked, partly because the total in the county was always impressive (for the Southdown spread during the horned breed's swiftest decline), and partly because Hampshire sheep fairs remained in the forefront, although largely as entrepôts for western-bred lambs bound for fattening pastures in the home counties. Yet in 1794 a decline of one-third in the county's sheep population was estimated and was attributed to the enclosure and ploughing of sheep-walks.[4] At this date

[1] See e.g. Milner, *op. cit.*, pp. 241–5.

[2] *An Account of the Odiham Society for the Encouragement of Agriculture and Industry*, n.d. [1785], p. 49. Simultaneously the Society offered premiums for enclosure, the largest being for the enclosure of 'waste'.

[3] Mr P. G. H. Hopkins, personal communication. It is unsafe, however, to advance as further evidence of concern lease clauses demanding prohibitive rents for pasture converted to tillage. These were the accepted means of maintaining the pasture-arable ratio, and were particularly important in this district, where good pasture was ever scarce.

[4] A. & W. Driver, *op. cit.*, p. 22.

Young, who thought Hampshire better sheep country than Norfolk or Suffolk, claimed the county was understocked. In 1798 Marshall said, "the long-established breed of Wiltshire and Hampshire are routed, in every quarter; and may soon be extinct."[1] As late as 1810 the ubiquitous rotations involving turnips and green crops, the recently introduced swedes, and the "still partial" introduction of Southdowns had not compensated for "the great deficiency of sheep stock" arising from "the improvident destruction of the former sheep-walks."[2]

Although extensions of grain production characterize the Napoleonic war period, there was some redress in a similar expansion of store and mutton production. Growing demand for mutton prompted Hampshire farmers to adopt the Southdown sheep in the 1790's. A flock was purchased in 1792 by W. P. Powlett of King's Somborne, a member of the Board of Agriculture, on Young's recommendation. By 1795 both men were convinced that the experiment had demonstrated the breed's superiority, and Young was able to support this conclusion—which he had embraced in advance—by calculating that at best horned sheep gave only the profit of the fold. Southdowns, he admitted, were dear to buy, but three, he claimed, could be run for two of the old breed. Vancouver observed the ratio as five to four.[3]

Early mentions of Southdowns in Hampshire come from the south-eastern parishes flanking the South Down Hills—from Soberton in 1799, from Hambledon and Buriton in 1801.[4] In the former year, with the main spread beginning, Thomas Edwards of Hunton bought two Southdown rams and two hundred ewes locally and one ram from nearby Longparish. Edwards was soon buying Southdown rams in south-east Hampshire and Sussex and selling them in his native north-western corner of Hampshire.[5] In 1801 Thomas Terry, squire of Dummer, bought 300 Southdown ewes at Lewes, with "more than a proportionate number of rams" to cross with his Hampshire ewes.[6] Terry and his son faced ridicule at local markets, but within seven years opinion completely changed in their favour. By 1815 the Southdown, or its cross on the Hampshire ewe from which the Hampshire Down derives, was the dominant Chalkland strain.

The spread of swedes followed that of Southdowns. At Buriton in 1801, "Swedish turnips have been introduced and highly approved of."[7] They

[1] W. Marshall, *The Rural Economy of the Southern Counties*, 1798, II, p. 347.
[2] Vancouver, *op. cit.*, pp. 365–74. [3] Vancouver, *op. cit.*, p. 374.
[4] *Hampshire Repository*, I, p. 76; II, p. 197.
[5] Thomas Edwards's Account Book, 1790–1805, HRO: 2M37/340.
[6] A. M. W. Stirling (ed.), *The Diaries of Dummer*, 1934, p. 133.
[7] *Hampshire Repository*, II, p. 212.

were introduced at Dummer in 1802 and at Hunton in 1803.[1] There was a causal connection between the two innovations. Southdowns were admirably suitable for a period of contracting grassland since they were folded and fattened on arable crops. Their successful overwintering thus demanded a fodder crop which would bridge the 'hungry gap' between the last turnips, which kept badly during frost, and the first bite of watered grass. Swedes filled this gap, since they kept better than turnips and could be reserved until these had been fed off. It may be suggested that the nation-wide spread of swedes, which has been described as only occurring in the first decade of the nineteenth century although their properties had been known for years,[2] was much influenced by the wide substitution of arable for grass sheep.

The grass flocks of the horned breed had been suited above all else for the fold. The lambs were forced for sale at Weyhill Fair at Michaelmas, but otherwise mutton and wool production left ample room for improvement. Southdowns, by contrast, were fatter, producing more lambs, better carcases, and more, shorter-stapled, wool. Their disadvantages arose from the higher costs of managing and feeding arable sheep, especially the great expense of growing roots. Shepherding costs rose, since fewer sheep could be tended when permanently folded than when loose on the downs. Shepherds commanded wages higher by half than labourers, with still higher rates at lambing. The capital cost of a Southdown flock was high, and altogether sheep became an expensive item in farm budgets. Probably only the example of the large class of squires and wealthy tenants, the overall profitability of wartime farming, and the growing demand for mutton made feasible so quick and complete an introduction of Southdowns. The cost of their maintenance was to become a matter of moment after 1815.[3]

IV

Another change in the cost structure of Chalkland farming during the Napoleonic wars was due to difficulties of labour supply. Wages were raised early, as provision prices mounted and the lot of the private soldier, which it was thought advisable to equal, improved.[4] Attitudes towards labour were noticeably less benevolent after the failure of the Peace of Amiens, when

[1] Stirling, *op. cit.*, and HRO: 2M37/340. Thomas Edwards's accounts suggest growing pressure on his fodder supplies as he increased his sheep stock in the first years of the nineteenth century. He began to pay other farmers to winter some stock, bought the feed of Hunton Down, and in 1805 that of 6¼ acres of turnips, and began to purchase rape and swede seed.

[2] N. Harvey, 'The Coming of the Swede to Great Britain', *Agric. Hist.*, XXIII, 1949, pp. 287–8.

[3] For the main features of the system centred on arable sheep see the description of the similar Norfolk four-course in H. G. Sanders, *Rotations*, M.A.F.F. Bulletin 85, 1954, pp. 7–9.

[4] Enquiry into the General State of the Poor, 1795, *Hampshire Repository*, I, 1799, p. 19.

military requirements and war-work at high piece rates (notably in Portsmouth dockyard) depleted the agricultural labour force and left the remainder discontented.[1] Between 1801 and 1811 the proportion of Hampshire's population engaged in farming fell, precisely when efforts to expand production might have absorbed an increase. The total population of the 148 Chalkland parishes increased by only 2,740 (compared to 8,724 between 1811 and 1821) and the population in 49 parishes actually decreased.[2] The farm labourer's weekly wage rose by three or four shillings. With the expensive parochial administration and the current provision prices the £50,000 which the Chalklands population of nearly 60,000 spent on poor relief in 1809 may have gone to support only the transient, the unemployable, and those who were jobless in winter.

Hands were at a premium for harvest, and from 1802 Thomas Edwards of Hunton was glad to engage soldiers to help reap his wheat.[3] As Southey explained, "the country is mostly down, recently enclosed, and of wonderfully thin population in comparison of the culture. Indeed harvest here depends upon a temporary emigration of the western clothiers."[4] Another farmer, James Edwards of Horsebridge, was troubled by the restlessness and unreliability of labour; he began to board out his men, acting on a clear intention of avoiding the direct impact of rising provision costs.[5] The increasing cost of labour, as much as the growing profitability of grain production, must have induced the investment in threshing machines, which by 1808 had "been erected of late years, and at a very heavy expense, in many parts of this county."[6] Thereafter labour for threshing by flail, the main winter occupation, became increasingly redundant.

V

Hampshire Chalkland farming evinced many signs of a boom between 1793 and 1815. Farmers needed little urging to expand their businesses and may have borrowed heavily on the expectation of continuing high prices for farm products.[7] The Hampshire Agricultural Society grew from the annual

[1] Vancouver, *op. cit.*, pp. 374–88.

[2] See Abstracts of Censuses and Returns, 1801 and 1811; and Table of Population, 1801–1901, in *V.C.H. Hampshire*, v, pp. 435–50.

[3] Account Book, 1790–1805, HRO: 2M37/340.

[4] R. Southey, *Letters from England*, ed. Jack Simmons, 1951, p. 42.

[5] Farm Account Books, HRO: 2M37/341 (1800–5) and /342 (1805–9).

[6] Vancouver, *op. cit.*, p. 106. This was written in 1807–8. Cf. W. H. Chaloner, 'The Agricultural Activities of John Wilkinson, Ironmaster', *Agric. Hist. Rev.*, v, p. 51.

[7] A tenant of Sir Henry Tichborne borrowed £2,000 from him and another tenant £2,573 on stock at entry to an additional farm.—General Account of the Hampshire Estates, 1795–1817, HRO: 37M48/10. Thomas Edwards borrowed a total of £700 between April 1799 and July

wool exhibition at Magdalen Fair, Winchester, and local societies multiplied. The true boom was probably short-lived, as costs soared and the burden of taxation became weightier. There was no rebuilding to match those which locally characterize the mid-eighteenth and mid-nineteenth century agricultural expansions. Real profits were doubtless smaller than wheat prices, farm turnovers, or the alleged appearance of a claret-drinking, fox-hunting tenantry might suggest.

Yet, although insubstantial, the boom carried to a hasty conclusion the gradual developments of a half century. The plough made immense inroads into the downland and grassland flocks dwindled. Sheep began to contribute more than the benefit of the fold and store animals—more mutton, wool, and store lambs. A labour-saving machine of general application was introduced. Last, but not necessarily least, a new acceptance of progressive change and rising living standards was born in the farming community. The superstructure of Chalkland agriculture came by 1815 to rest on sky-high prices for wheat and mutton. This transition and increase in scale had been bought only at high and sometimes continuing cost. The shifts in the relationships between farm enterprises were fraught with significance for the coming depression.

In contrast to 1715, the accent in 1815 was on the greater sale of sheep products and a more extensive grain production. Changes in techniques and costs had been wrought and could not be easily reversed. Thus, although 'sheep-and-corn' certainly applies to Chalkland farming at both dates, it neglects the essential economic and technical distinctions between them.[1] Similarly, its use to describe farming on the 'good sands' of Norfolk, the 'Ryelands' of Herefordshire, and the chalk of the southern counties, fails to draw the necessary distinctions between dissimilar systems.[2] It may be urged that the acceptance of popular descriptions of farming systems should be replaced by scrutiny of their economic features in each locality and at every period. From this an appropriate terminology for the phases of change should emerge.

1800, probably for land purchases at Broughton.—Account Book of Thos. Edwards's expenses, 1789–1800, HRO: 2M37/339.

[1] On the contrasting structures of Chalkland farming (in Wiltshire) in recent periods of prosperity and depression, see A. H. Maunder, 'A Study of Farming Change', *The Farm Economist*, VII, August 1953.

[2] Cf. A. Simpson, 'The East Anglian Foldcourse: Some Queries', *Agric. Hist. Rev.*, VI, 1958, p. 88. A cursory examination of evidence for Berkshire, Wiltshire, and Dorset—where the store sheep production also pivoted on Weyhill Fair—suggests that the Hampshire changes were, with local variations, typical of the whole Wessex Chalkland. Cf. G. Slater, *The English Peasantry and the Enclosure of Common Fields*, 1907, pp. 234–5.

The Wheat Act of 1932
A Forerunner of Modern Farm Price Support Programmes

By J. A. MOLLETT

INTRODUCTION

THE 1932 Wheat Act (22 & 23 Geo. 5, Ch. 24) deserves a special place in the history of twentieth-century British agriculture. Its passage marked the beginning of a long series of Acts generally designed to improve the relative income position of farmers and farm-workers. It also introduced a system of 'deficiency payments' to growers which has become the chief means of subsidizing the great bulk of British agricultural output. A study of the experience initiated in 1932 should help to reveal the merits and demerits of this type of subsidy. It should also show how political thinking about farm subsidies has changed since the early 1930's.

Government support for wheat prices introduced by the Act in 1932 was essentially a matter of giving relief to practically bankrupt wheat farmers, mainly in the eastern counties of England. At that time there was no shortage of wheat; quite the contrary. Britain was the centre of the world wheat market. Well over 90 per cent of the wheat consumed for food was imported. British wheat contributed only one-sixth of the total used for human and animal consumption. It was generally accepted to be in Britain's best interests to encourage the flow of relatively cheap grain from overseas in exchange for manufactures. The slogan "no tax on bread" had been popular for years, and subsidies for wheat growers had been avoided by successive governments.

However, renunciation of free trade in 1931–2 and the drastic fall in world wheat prices induced the government to place duties on foreign wheat and a levy on all sales of flour in order to provide payments for British wheat-growers. As most flour was either imported or made from imported wheat, this meant that a relatively small levy would bring in an appreciable amount for distribution as 'deficiency payments' on British millable wheat.

In the 1920's it had seemed that wheat-growing for bread would soon largely disappear in Britain. World production had increased considerably. The major wheat-exporting countries were taking rapid advantage of improved methods of cultivation, harvesting, and better strains of wheat, to

give them a greater advantage in wheat-growing as compared with most European countries. However, certain interests did not readily admit the logical end, which was to accept more or less complete dependence on overseas supplies of grain. Numerous attempts were made by official and political organizations to revive agrarian protection, to "stop the drift from the land," halt the decline in arable area, and ensure a "strong agriculture" for defence purposes. The fact that Britain could produce more food if agrarian interests received "proper attention" was of more significance to these interests, mainly dominated by the Farmers' Unions, than that imported food could be bought much more cheaply. However, the change in the political outlook at the end of the 1920's and protectionist policies subsequently adopted helped to alter the political climate, which had previously regarded any form of protection for British agriculture as impossible.

Wheat was the most important cash crop in English farming when the Act of 1932 was passed. It occupied a larger area and was more widely distributed by regions and in rotations than any other arable crop, except oats which were mainly consumed on the farms where they were grown. Farm returns from sale of wheat in the 1920's represented between 4 and 6 per cent of total sales of agricultural produce. Wheat occupied about 10 per cent of the arable area and about 5 per cent of the total cultivated area. It was most important in eastern and north-eastern England, where just over half the wheat was grown.

British wheat, then as now, was a predominantly soft wheat with a low gluten content. It is not very suitable for modern methods of bread-making and is mainly used for livestock feeding, biscuits, pastry, and cakes. The British loaf of the 1930's traditionally contained only a very small proportion of home-grown wheat. The greater part of the grist was high gluten flour from imported hard wheats.

British wheat, being harvested in relatively small lots under varying conditions, is not readily available to mills concentrated heavily in cities on or near the coast, such as those at London, Southampton, Liverpool, and Glasgow, in sufficient amounts and sufficiently uniform in grade to compete effectively with the pick of the world's exported wheats. In addition, domestic wheat generally contains much more moisture. This factor frequently damages the milling quality. British wheat is thus hardly comparable in general texture to most imported supplies, and the method of marketing differs as most British wheat is processed in small country mills while imports are handled at the large port mills.

It should be mentioned, however, that good yields of between one and one and a half tons per acre of soft wheat are common in the drier eastern areas of

England and that in 1932 new strains of hard wheat were already increasing in popularity.

THE WHEAT ACT, 1932

Various alternative measures to assist wheat-growers had been advocated before the 'deficiency payments' scheme was started. The Wheat Act included elements of these proposals which comprised: (i) high tariffs on wheat and flour imports (a tariff on flour imports was strongly supported by British millers), (ii) subsidies on arable or fallow land, (iii) a compulsory milling quota for British wheat (as employed in aid of wheat-growers in Germany, France, and Spain in 1929–30), (iv) a wheat import board, (v) guaranteed prices for British wheat, (vi) import quotas for Commonwealth wheat, and (vii) tariffs on imports, with some Commonwealth preference.

The object of the Wheat Bill was "to provide wheat-growers in the United Kingdom with a secure market and enhanced price for home-grown wheat of millable quality without a subsidy from the Exchequer and without encouraging the extension of wheat cultivation to land unsuitable for the crop."

The enhanced price was to be secured by means of 'deficiency payments' to wheat-growers on the basis of certified sales of millable wheat. The deficiency payment was to be the difference between the average market price of British millable wheat as calculated at the end of each cereal year (ending 31 July) and a "standard price" of 10s. per cwt. Administrative expenses of the scheme were to be deducted from deficiency payments. A secure market for millable wheat was provided by a clause which imposed upon millers the obligation to buy unsold stocks remaining at the close of any cereal year. Any losses or profits arising from the sale of these compulsorily acquired stocks were to be apportioned pro rata among registered millers in proportion to their output for the year. The Flour Millers' Corporation was established in connection with the Act. It had the responsibility of buying and disposing of stocks of home-grown millable wheat remaining unsold late in the cereal year, if ordered to do so by the Minister of Agriculture.

The standard price of 10s. per cwt was not to be guaranteed on an unlimited quantity of millable wheat. The Minister of Agriculture had to prescribe, for each cereal year, the quantity of wheat of this description which he anticipated would be sold. Should the quantity of millable wheat exceed the "anticipated supply" then deficiency payments would be reduced proportionately. The Wheat Bill stated that this anticipated supply was not to exceed 27 million cwt.

Funds to provide deficiency payments were to come from "quota payments," or levies, on all flour sold in the United Kingdom, to be collected from flour millers and importers by the Flour Millers' Corporation and paid

weekly to the Wheat Commission. Special provision was made concerning quota payments on that part of the miller's output which proved, to the satisfaction of the Wheat Commission, to consist only of "meal" for use as animal or poultry feed. If any miller satisfied the Commission that his output during any cereal year would not comprise any flour other than meal, and that the whole of that flour would be consumed as animal or poultry feed, the Commission could grant him a "provender miller's certificate." It exempted the miller from liability to quota payments on his output of flour during that year. The certificate could be revoked, however, if at any time the Commission ceased to be satisfied. Special provision was also made for the repayment of quota payments in respect of flour exported and shipped as stores.

The Minister of Agriculture had the chief responsibility of putting the provisions of the Act into effect. He had to make Orders prescribing the average price of home-grown millable wheat, the anticipated supply of such wheat, and the amount of quota payments, or the cessation of these payments. Any such Order could be annulled by either House of Parliament within twenty-eight days after it had been laid before Parliament.

The main burden of administering the Act fell on the Wheat Commission which was specially formed for this purpose. It was set up as a corporate entity and not formally attached to the Ministry of Agriculture—although the Minister had to approve its bye-laws. The Commission consisted of nineteen members, all appointed by the Minister of Agriculture. It had a paid chairman and vice-chairman and seventeen unpaid members.

Wheat-growers had to register with the Wheat Commission in order to receive deficiency payments, giving details of their farms and the area under wheat. After each sale a registered grower had to apply for a "wheat certificate" from an authorized merchant. This certificate had to show the quantity, price, and other details of sale and delivery. It had to state that the wheat sold was of the last crop, grown on the specified farm occupied by the registered grower, sold as represented, and of millable quality.

The quality of wheat delivered was determined by an authorized merchant, who applied the standard prescribed by the Minister of Agriculture as laid down in the 1932 Act. Millable wheat was "wheat which is sweet and in fair merchantable condition, commercially clean as regards admixture and tailings, and commercially free from heated or mouldy grains or objectionable taint, and capable of being manufactured into a sound and sweet flour fit for human consumption having regard to the customary methods employed in the milling industry for cleaning and conditioning wheat."[1] An

[1] Ministry of Agriculture and Fisheries. *Report of the Wheat Commission upon the Administration of the Wheat Act, 1932.* Economic Series No. 45. (London: H.M.S.O., 1938), p. 8.

appeal could be made to a regional arbitration body, called a "local wheat committee," in any disagreement about wheat quality.

The standard price of 10s. per cwt was fixed by the Act for the first three years of operation. In 1935 a committee of three was appointed to review the standard price in the light of general economic conditions and those affecting agriculture. It reported that no change in standard price was needed, but recommended that this price be reviewed regularly at three-year intervals.[1]

Ten shillings per cwt was not high in relation to comparable prices of British wheat between 1922 and 1930. The average price had not been lower than 9s. per cwt in any year of that period. It had been above 10s. per cwt in five of those years. The price fell to 5s. 8d. per cwt in 1930–1, however, or about half the level of the future standard price of 10s. per cwt.

In the debate on the Wheat Bill the Minister of Agriculture stated that "if we fix the (standard) price too low, so that the great majority of growers could not produce wheat without loss" the Bill would be of little use; on the other hand, "if the price were too high, wheat cultivation would be extended to land unsuitable to wheat production and for an excessive amount to be required in quota payments from millers and importers of flour, and ultimately from the consumer."[2]

Some doubts were raised in this debate whether the standard price was not too high. Lady Astor asked the Minister: "whether in fixing the guaranteed price of wheat at 45s. (per quarter) in the Wheat Bill, he has aimed at giving a fair profit to those who grow wheat in the country at the cheapest cost of production or at the average cost of production." The Minister replied: "In fixing the standard price of 10s. per cwt, careful consideration was given to all available information concerning cost of production. That figure was selected as likely to afford a measure of assistance to growers of wheat generally who are faced with the present abnormal conditions and without encouraging an extension of wheat to unsuitable land." Lady Astor: "Does the right honourable Gentleman think that paying a subsidy for wheat will not have the effect of encouraging farmers to grow wheat who have never grown it before and never will grow it economically?" The Minister: "The Noble Lady must not assume anything of the kind."[3]

This kind of discussion frequently neglected the fact that wheat-growing with relatively attractive, guaranteed prices would readily displace some

[1] Ministry of Agriculture and Fisheries. *Report of the Standard Price Committee.* (London: H.M.S.O., 1935), Cmd 4932.

[2] *Parliamentary Debates: Official Report.* Fifth Series, Vol. 262, Cols. 965–6.

[3] *Parliamentary Debates,* Vol. 262, Cols. 1975–6.

other grain crop. Thus, wheat became an 'economic proposition' on so-called unsuitable land.

The maximum quantity of wheat on which the standard price was assured was 27 million cwt (about 50 million bushels), implying a total crop of some 59 million bushels. Only once during the period 1923–32 had a crop of this size been surpassed. If (as it turned out) more wheat was sold than the stated maximum, quota payments would be levied to provide deficiency payments only on that amount. This would not, of course, bring the average price of home-grown wheat up to the standard price.

The flour levy was determined by the anticipated supply of British millable wheat, the estimated deficit between market and standard price, and estimated flour deliveries. It was calculated by the following formula:

$$\frac{\text{anticipated supply of millable wheat} \times \text{estimated price deficit per cwt}}{\text{estimated flour deliveries (sacks)}}$$

which gave the rate of levy per sack of flour. The first quota payment was calculated as follows:

Estimated price deficit	4s. 3d. per cwt
Anticipated supply of home-grown millable wheat ..	19·8 million cwt
Estimated supply of flour	93·5 million cwt

$$\text{Rate of levy} = \frac{19{\cdot}8 \text{ million} \times 4\text{s. } 3\text{d.}}{93{\cdot}5 \text{ million}} = \begin{matrix} 10{\cdot}8\text{d. per cwt or} \\ 27\text{d. per sack} \end{matrix}$$

Details of the flour levy are given in the section dealing with the operation of the Wheat Act; at this point, it may be stated that frequent changes in levy rates were discouraged because of their disturbance to the flour trade.

The anticipated supply was a fundamental quantity in the operation of the Wheat Act. It was a factor in the calculation of the millers' quota payment; until the passing of the Agriculture Act, 1937, it determined the limit of liability of the Flour Millers' Corporation with respect to unsold stocks (see p. 32). The anticipated supply also limited the amount of the deficiency payments payable by the Commission to each registered grower.

The Minister of Agriculture was required, after consultation with the Wheat Commission, to prescribe, at or as soon as practicable after the start of each cereal year, the quantity of home-grown millable wheat which he anticipated would be sold by registered growers during a particular year. The quantity so prescribed could be varied by an Order of the Minister made before the end of January in that year, but it was unalterable after 31 January.

RECEPTION OF THE ACT

Apart from general criticism because of its complexity, the Wheat Bill had keen support from the larger wheat-growers in eastern England and the general body of farmers. The latter saw (and rightly) that the Bill was the first move in the direction of general support for farm prices. Political support for the Bill came from the Conservative Party, which had strong agrarian and protectionist sympathies. Tory sentiments favoured the view that cheap bread had been obtained only at the sacrifice of farmers and other workers in agriculture, in the interest of people in the cities. The Tories held the opinion that a helping hand should be given to wheat-growers "who found themselves in a disastrous position because Britain was the last great free market for wheat."

The Labour Party and Free Traders opposed the Bill. They were concerned with the regressive nature of the "excise tax" on flour. They held that the burden of any increase in bread prices as a result of the Bill would fall most heavily on the poor. Nor did those opposing the Bill like the delegation of authority to tax, preferring subsidy payments to come out of Exchequer funds where they would be under the direct control of Parliament. Taxation of a staple commodity such as bread was also hailed as a backward step, especially as the tax would benefit such a very small segment of the population. *The Economist* found it curious that "a government which could not include wheat in its 10 per cent tariff because of its members' pledges not to tax 'staple food' (wheat and meat) and because the possible repercussions on the cost of living might even have endangered 'the safety of the pound,' could within the space of a fortnight introduce a measure which taxes the self-same article 18 per cent by throwing in twenty-nine pages of cuttlefish draftsmanship."[1]

Spokesmen for the Labour Party argued that wheat rightly had a small place in British agriculture, that there was no justification for attempting to increase its importance, and that any aid should go to other branches of farming. Fear was expressed that deficiency payments would not go to the farmers most in need, as larger farmers who were perhaps better placed to make adjustments would receive the lion's share of total payments (larger farmers, who include many wheat-growers, can voice their appeals for aid most effectively and had done so in this instance). Also that the net effect would be to maintain or increase rents rather than to benefit wheat growers (what little evidence is available, however, suggests that rents showed little immediate change after the passing of the Wheat Act).

Free traders emphasized the harmful effect of protective measures on

[1] *The Economist*, 27 February 1932, p. 451.

overseas trade. Mr Attlee condemned the Bill as "merely a device for calling a tariff a quota" as there was no incentive throughout the Bill to buy British wheat; it gave "a dole to certain industries divorced altogether from control or from any idea of reconstruction."[1]

The Economist declared in scathing terms that "the wheat legislation was, thus, not a protective measure of child welfare for an 'infant industry' like the sugar-beet industry. It was rather in the nature of a national whip-round on behalf of a picturesque village 'ancient,' probably our oldest inhabitant, whose relapse into penury would be a matter of regret but [not] of reproach to us."[2]

Opposition to the Bill was somewhat lessened by the fact that the maximum deficiency payment to wheat growers provided for only a moderate rise in the price of bread. Supporters emphasized the relief of financially distressed wheat-growers but not the increased production of home-grown wheat.

THE ACT IN OPERATION, 1932 TO 1940

Between 1932 and 1940 the Wheat Act accomplished its primary objective of bringing financial relief to wheat-growers. It also led to a relatively large and sudden increase in wheat production by providing an attractive minimum price and an assured market.

Table 1 summarizes some of the more important data relating to the operation of the Act. The table shows the relative importance of deficiency payments in the different years, the sharp rise in number of wheat-growers in the first three years of the Act—from 77,000 in 1932–3 to 95,000 in 1934–5—in wheat acreage, and the average annual quantity of wheat sold per grower.

Total deficiency payments to wheat-growers fluctuated considerably from year to year as a result of differences between annual average price and standard price, and the quantity on which the standard price was based. These payments, after administrative expenses of the scheme had been deducted, were as follows:

Year	*£ Million*
1932–3	4·5
1933–4	7·1
1934–5	6·8
1935–6	5·6
1936–7	1·3
1937–8	1·9
1938–9	9·2
1939–40	6·1

Administrative expenses were relatively very small (between 1 and 3 per cent of total flour levies); ranging from £52·7 thousand in 1932–3 (58

[1] *Parliamentary Debates*, Vol. 264, Col. 360. [2] *The Economist*, 12 August 1933, p. 313.

weeks) to £68·2 thousand in 1935–6. The deduction per cwt in the different years varied from 0·52d. to 0·68d.

TABLE 1. DATA RELATING TO THE OPERATION OF THE WHEAT ACT, 1932–3 to 1939–40

	Number of wheat growers*	Total area in wheat	Average quantity of wheat sold per grower	Average market price†	Adjusted deficiency payment‡	Total returns§
	(*thousand*)	(*thousand acres*)	(*cwt*)	*d per cwt*	*d per cwt*	*d per cwt*
1932–3	77	1,343	266	64·5	53·3	117·8
1933–4	87	1,745	341	55·6	58·3	113·9
1934–5	95	1,866	379	58·9	45·6	104·5
1935–6	94	1,882	359	69·2	40·2	109·4
1936–7	83	1,805	287	105·9	13·5	119·4
1937–8	77	1,836	319	100·4	19·0	119·4
1938–9	81	1,928	453	54·8	64·7	119·5
1939–40‖				55·2	76·3	131·5
1939–40	73	1,766	393	70·3	60·2	131·5
1939–40‖				85·4	46·1	131·5
1939–40				84·2	47·3	131·5

* Growers for whom accounts were opened by the Wheat Commission in any particular year.

† Average price ascertained by the Wheat Commission at the farm-gate.

‡ Deficiency payments were proportionately reduced when the quantity of wheat certified as sold exceeded the anticipated supply; thus, in 1932–3, growers received deficiency payments for 97 per cent of the wheat sold, the corresponding figures for the other years were: 1933–4, 91·3 per cent; 1934–5, 75 per cent; 1935–6, 80 per cent; 1936–7, 100·0 per cent; 1937–8, 100·0 per cent; 1938–9, 93·5 per cent; and 1939–40, 100·0 per cent.

§ The standard price of wheat was 120·0d. from 1932–3 to 1938–9 and 131·5d. in 1939–40.

‖ On the outbreak of war, the accounting year for calculating deficiency payments was divided into four seasonal periods in order to compensate farmers who sold their wheat at relatively low prices early in the fall of 1939. The four accounting periods were from: 1 August to 8 September; 9 September to 20 October; 21 October to 31 March, and 1 April to 31 July 1940.

Source: Ministry of Agriculture and Fisheries, *Report of the Wheat Commission upon the Administration of the Wheat Act, 1932. From 1 June 1932 to 31 July 1937*. Economic Series No. 45 (London: H.M.S.O., 1938), pp. 106–7, and data for 1937–8 to 1939–40 from private correspondence with the Wheat Commission.

The statutory limitation on the total deficiency payments curtailed returns from wheat-growing in 1934–5 and 1935–6 and would have exerted a similar effect in 1938–9—if the limit on which the full standard price could be paid had not been raised from 27 to 36 million cwt in the preceding year.[1]

[1] The data were as follows: in 1934–5, 75·2 per cent and in 1935–6, 80·2 per cent of total

As Table 1 shows, average annual sales per grower were relatively small, varying from 266 cwt to 453 cwt. Average quantity per grower tended to increase during the eight-year period under review; data which indicate where the increase came from are sparse. It seems very probable that average sales rose as a result of greater quantities from larger and more specialized wheat-growing farms in the eastern counties of England. Certainly the great bulk of deficiency payments went to farmers in that area.[1] No evidence is available to indicate what effect the Wheat Act had upon the amounts of fertilizer applied to wheat. Average yields varied considerably from a record 20·0 cwt per acre in 1934 (compared with 17·4 cwt in 1932) to 16·4 cwt per acre in 1937. A large part of these differences, however, was undoubtedly attributable to adverse or favourable weather at planting and harvest times.

No details are available of the distribution of deficiency payments among different sizes of farms. A later enquiry[2] not directly related to this matter suggests that about 40 per cent of total deficiency payments went to one-tenth of the growers, and roughly 15 per cent to small growers who were about half the total number.

Although the Wheat Act had the effect of approximately doubling returns from wheat-growing, above what the market would probably have offered, between 1932–3 and 1939–40, farm income did not benefit by as much as this comparison would suggest. Wheat income increased mostly at the expense of income from such alternative crops as oats and barley. Since wheat at import prices contributed only between 3 and 5 per cent of gross agricultural output, the increase in aggregate net income resulting from deficiency payments amounted to between 1 and 2½ per cent, though, of course, on farms where wheat was of special importance, the impact of deficiency payments was much greater.

Although the standard price of 10s. per cwt was not as high as wheat-growers had demanded, it was almost double the market price in 1932. At that time wheat prices had fallen more than most other farm prices. This is shown by the following price indices for wheat, and for all farm commodities between 1927 and 1932.

certified sales, respectively, were eligible for full standard price. The deficiency payment on all sales was thus reduced proportionately. The unadjusted deficiency payments for 1934–5 and 1935–6 were 60·6d. and 50·2d. per cwt, respectively, while the corresponding adjusted deficiency payments were only 45·6d. and 40·2d. per cwt.

[1] K. A. H. Murray, *Agriculture*, United Kingdom Series of the Second World War (London: H.M.S.O., 1955), p. 30.

[2] D. K. Britton, 'Frequency Distribution in British Agriculture'. Reprint from *The Incorporated Statistician*, Vol. II, No. 3, November 1951.

	1927	1928	1929	1930	1931	1932
Wheat	109	97	94	80	56	56
General index	99	102	99	91	83½	80½

(1927–9=100.) Source: Ministry of Agriculture and Fisheries, *Index of Agricultural Prices* (London: H.M.S.O., 1938), Table 1.

Thus, in 1932 the wheat price index stood at 74 (with the deficiency payment) and 56 (without the payment) compared with the general index of 80½.

Farmers received encouragement to grow more wheat, not only from higher prices, but from a more secure price, compared with prices of barley and oats (that is, until 1937, when prices of these two crops were subsidized) and a certain market. Thus, the resulting increase in wheat acreage—from 1·2 million acres in 1931 to 1·9 million acres in 1934—came almost entirely at the expense of oats and barley. The Wheat Act failed to halt the downward trend in arable acreage, one of its secondary objectives.

At the outset, it seemed probable that the Act would depress British wheat prices. Increased supplies of British wheat of a quality unsuitable for bread-making were expected to depress market prices and widen the traditional difference in price between imported hard wheat and home-grown soft wheat. New methods of bread-making required hard wheats with only a small proportion of soft wheats.[1]

A comparison of average prices of British wheat (at the farm-gate) and of all imported wheat (customs duties included) for the period 1932–3 to 1938–9 is given in Table 2.

TABLE 2. AVERAGE PRICES OF IMPORTED AND BRITISH WHEAT 1932–3 TO 1938–9

Year	Imported wheat	British wheat	Price difference
	d *per quarter* (504 *lb*)	*d* *per quarter* (504 *lb*)	*d*
1932–3	315·0	288·0	27·0
1933–4	292·5	252·0	40·5
1934–5	328·5	265·5	63·0
1935–6	364·5	310·5	54·0
1936–7	522·0	477·0	45·0
1937–8	504·0	444·0	60·0
1938–9	297·0	247·5	49·5

Source: *Report of the Wheat Commission*, p. 138, and private correspondence with the Wheat Commission.

[1] Dr A. Salter, M.P., in the debate on the Wheat Bill, estimated that English flour supplied bread for only 860,000 people out of the 44 million in England in 1932 or about 2 per cent of national needs.—*Parliamentary Debates*, Vol. 262, Col. 998.

The relatively limited market for British wheat in bread-making inevitably meant that the greater part of increased supplies resulting from the Wheat Act had to be fed to livestock.

There was a large increase in wheat feeding, either as grain or meal, to livestock in the 1930's. This resulted mainly from the lack of any restrictive provisions in the Act. It did not directly discourage imports. Only in 1936–7 was there any noticeable check in imported supplies and it largely resulted from a decline in exports from the major wheat-exporting countries.

Imports of wheat products (offals) used for livestock feeding, and particularly for poultry, increased from 260 thousand tons in 1930–1 to 691 thousand tons in 1936–7. They remained at about the 1936–7 level until the Second World War began, when they were sharply reduced. Wheat fed to livestock increased from 2·7 million tons in 1930 to 3·8 million tons in 1933–4.

It is interesting to note that in the early years of the Wheat Act, at least, sales of wheat off farms increased proportionately more than production. Thus in 1931 probably no more than two-thirds of production was sold for cash; while the corresponding figure went up to about 95 per cent a year later. Farmers were selling more wheat for cash and collecting deficiency payments. Then they proceeded to buy their own wheat back or cheap foreign wheat, for livestock feeding.[1]

Demand for wheat to feed livestock proved to be relatively elastic. This, and the fact that the Wheat Act did not attempt to reduce the feed outlet for millable wheat, were undoubtedly 'safety valves' of the scheme. Other plans to help wheat-growers had contained more rigid provisions which judging from experience in the United States would probably have caused complex problems of 'surplus'.

The demand for feed grain was such that millers had little need to fear that they would be required to buy any unsold stocks at the end of any cereal year. The increased supply of home-grown wheat was readily absorbed by the market. No important difficulties in marketing the increased supplies were reported by the Wheat Commission. The important problem of meeting competition from imports of soft wheat was met by lowering British prices.

The average annual rate of levy per sack of flour varied (see Table 3) from 11d. in 1936–7 to 66d. in 1938–9. The Commission had to keep in mind that frequent or large changes in the quota payment during a particular cereal year were disturbing to the trade. However, the Commission had a difficult task in preparing estimates for twelve months ahead. In spite of

[1] R. G. McCarslaw and A. W. Menzies-Kitchen, 'Effect of the Wheat Act, 1932 on Production', *The Farm Economist*, 1 January 1933, pp. 17–18.

these difficulties, their original estimates proved to be close to the mark and in the first three cereal years only five changes were made in the quota payment. The improvement in wheat prices during 1935–6 and 1936–7, however, necessitated a steady reduction in the rate of quota payment. Three reductions of 6d. per sack (280 lb.) occurred in 1935–6, the rate of quota payment in effect at the end of that year being 3s. per sack. Two reductions of 1s. per sack were made in 1936–7 and a reduction of 6d. per sack in January 1937, the payment being eventually suspended from 18 April to 18 September 1937.

It was clear that the fact of a change being under consideration, the nature of the change, and the date of its introduction, should be kept secret in order to prevent forestalling. On the other hand, it would have been a serious inconvenience to traders if they had not known immediately a change took effect. It was, therefore, arranged that every miller and importer known to the Commission as being regularly liable to make quota payments should be notified by letter dispatched from the Commission and that the National Press should publish an announcement on the morning of the day the new Order relating to quota payments came into force.

As stated earlier, at no time under the operation of the Wheat Act was the Flour Millers' Corporation called upon to buy any unsold stocks of wheat. Under Section 1 of this Act the Minister of Agriculture could require the Flour Millers' Corporation to buy up to 12½ per cent of the anticipated supply in any year. By Section 13 of the Agriculture Act, 1937, the maximum quantity of home-grown millable wheat which the Corporation might be required to buy was limited to 4 million cwt instead of 12½ per cent of the anticipated supply for that year. Under the same Act, the specified quantity on which the full standard price could be paid was raised from 27 to 36 million cwt.

The effect of the Wheat Act on consumers was not so drastic as its critics had forecast. Quota payments collected by the Wheat Commission from millers and importers were practically always recovered by these agents from buyers of flour at the time when the flour was delivered to buyers. About half the total quantity of home-milled and imported flour available (according to the 1930 Census of Production)—about 4·3 million tons—in the 1930's was used by bakers in bread-making, the remainder being used partly in the making of cakes, pastries, biscuits, and other kinds of food, textile finishing materials, dog biscuits, animal or poultry feed; and partly in hotels, restaurants, and private households (including home bread-making). It is not possible to state to what extent the price charged to consumers for articles made from flour (other than bread) was increased as the result of the incidence of the quota payment. The selling prices of these articles are determined

with reference to total costs rather than with reference to one item of cost.

The total price paid for flour used by bakers of bread is, however, directly related to the retail price of bread.[1] It is, therefore, of interest to show how bread prices varied in relation to the price of flour and quota payments.

Table 3 shows average annual flour prices, flour levies, and retail bread prices between 1932–3 and 1938–9. Perhaps the most significant data in this table relate to the fact that when the quota payment was at its highest level, in 1938–9 (66d. per sack compared with only 12d. per sack in the previous year), the price of bread was 1d. per quartern (4 lb. loaf) cheaper than in 1937–8, when, owing to high wheat prices, the quota payment was entirely suspended for a period. The table shows that the heaviest levies were paid (indirectly) by consumers when wheat prices were relatively low. As home-grown wheat supplied only a relatively small part of total flour supplies, a relatively small total levy sufficed for deficiency payments.

TABLE 3. PRICES OF WHEAT FLOUR AND THE RATE OF THE FLOUR LEVY IN RELATION TO THE PRICE OF BREAD, 1931–2 to 1938–9

Year	Average price of flour per sack	Average rate of levy per sack	Total cost per sack	Average price of bread per 4 lb. loaf
	(280 lb) *d*	(280 lb) *d*	(280 lb) *d*	(to nearest ¼d) *d*
1931–2	276	3*	279	7
1932–3	280	31	311	7¼
1933–4	264	51	315	7½
1934–5	289	51	340	7¾
1935–6	328	42	370	8¼
1936–7	455	11	466	9
1937–8	420	12	432	9½
1938–9	276	66	342	8½

* Estimated, the first quota payment operated from 19 June 1932.

Source: *Report of the Wheat Commission*, p. 138, and private correspondence with the Wheat Commission.

Another factor which lessened the burden, especially on poorer people, was the improving level of employment of the mid- and late-1930's.

It is clear that consumers had to pay more for their bread and other articles made with flour after the Wheat Act. But the net effect of this Act—that is, the effect of larger supplies of British wheat on world prices and the

[1] Changes in bread prices shown in Table 3 were determined to a large extent by the scale of maximum prices for bread recommended by the Food Council, which justified a variation in bread price by steps of ½d. per 4 lb. loaf when the flour price varied by steps of 4s. per sack. A change in flour price would, according to this scale, justify a change in the maximum bread price only if the effect was to bring the flour price into a higher or lower position in the steps of 4s. per sack for which the scale provided.—*Report of the Wheat Commission*, p. 139.

effect of these lower prices on the price of livestock products—is less clear.

An amending Act to the Wheat Act was passed in 1939.[1] It gave legislative effect to a number of relatively minor amendments which experience had shown to be necessary. Section 2, for example, contained provisions whereby, in the future, any person who purchased growing wheat, or wheat cut but not threshed, was to be entitled to claim deficiency payments when the wheat was sold. Under the original Act, in some instances, sellers of such wheat could not be regarded as the grower and the Wheat Commission had no power to make payments. Quota payments were altered for flour (more commonly termed wheat feed) destined for livestock feeding. Under the amended Act, millers who had previously been exempt from the liability to make quota payments in respect of that part of their output of flour which proved, to the satisfaction of the Commission, to consist only of meal for use as animal or poultry feed, were now liable to quota payments on three-eighths of this meal.

The relatively large addition to wheat-growers' income at the expense of a relatively small burden to consumers resulted from the fact that British farmers produced only a small fraction of the wheat consumed for food in their country. There was some interest in this plan as offering a better means of relieving the distress prevailing among United States growers than the domestic allotment plan. But there were striking differences influencing the application of the two plans. Britain raised less than one-fifth of the wheat it consumed (in the 1930's), while the United States, on the average, raised something like 130 per cent. A levy on flour consumption in Britain which was sufficient to yield a bounty to wheat-growers amounting to very substantial sums per bushel, and in some years more than the market price (in 1933–4, for instance, see Table 1), would in the United States have yielded only a small fraction of this amount per bushel. In order to raise the price to United States growers as much as was done in Britain in the 1930's, the required levy on flour consumption would have been many times as high as the one in effect in Britain at that time—so high indeed that consumption would have been materially affected. In addition, the administration of such a scheme in the United States would have been vastly greater and more complicated—although current price support programmes indicate that administrative problems of this kind can be overcome. Another difference between the two countries was that British wheat was practically all consumed at home while some American wheats were ordinarily exported. Differences of type, quality, and regional position are also much more important in the United States than in Britain.

[1] 2 & 3 Geo. 6, Ch. 37.

THE SECOND WORLD WAR AND AFTER

On the outbreak of the Second World War the government decided for the time being to carry on with the principle of the two Wheat Acts. However, several important changes were made. Market prices were to be regulated by the government and the cereal year was divided into four periods with separate deficiency payments. Another change was that from 5 May 1940, flour levies were suspended and necessary funds to enable the Wheat Commission to function were provided by the Ministry of Food from Exchequer funds.

After July 1940, wheat prices were never lower than the standard price of 10s. per cwt; thus, until wheat was freed from government control in 1953 no deficiency payments were made. The system of issuing wheat certificates and the general operation of the Wheat Commission's organization were suspended. The expenses of the Commission, previously borne by registered wheat-growers, were after 1939–40 carried by the Ministry of Food, largely to preserve the organization of the Commission. In the period of war and post-war controls most of the Commission's staff were transferred to the Ministry of Food.

From September 1939 to August 1953, government purchasing and controlled prices replaced the market price system for practically all agricultural commodities. Wheat, flour, and bread were all placed under price control. A free market for cereals was restored in August 1953.[1] The government played an important part in the purchase of the 1953 harvest in the change-over period from state to private trading. All trade for later harvest was in private hands, deficiency payments making up the difference between market and guaranteed price.

The scheme for deficiency payments which went into effect for the 1954 harvest is largely based on the pre-war pattern.[2] New features are as follows: no statutory limitation is placed on the quantity on which the full standard price can be paid (although there are provisions to invoke restrictions); the subsidy is paid out of Exchequer funds instead of from a levy on flour; the post-war scheme covers five cereals, wheat, oats, barley, rye, and mixed corn; it is administered by a government department instead of a semi-independent Commission. Another important change is that under the terms of the Agriculture Act, 1947,[3] a measure supported by all parties, the standard price of wheat is now considered along with other commodity prices at annual price reviews.

[1] Ministry of Agriculture and Fisheries, *Decontrol of Cereals and Feedingstuffs* (London: H.M.S.O., 1953), Cmd 8745.

[2] Ministry of Food, *Home Grown Cereals Deficiency Payments Scheme* 1954 (London: H.M.S.O., 1954).

[3] 10 & 11 Geo. 6, Ch. 48.

Plan of an Agricultural Society and Experimental Farm in Northumberland

By H. CECIL PAWSON

THE title is taken from a printed document in the writer's possession which covers eight large pages and is dated 1797. The document was prepared to provide "Hints for the consideration of the Committee appointed to prepare and digest" the plan as indicated. It would seem that after full consideration the time was not considered ripe for the project, for it was not until 1836 that the Northumberland Agricultural Society—which still continues—was formed, and Cockle Park, the world-famed experimental station, was not established until 1896. The seed for both these developments was surely contained in this earlier proposal.

In 1793, four years earlier than the document under consideration, J. Bailey and G. Culley in their *General View of the Agriculture of the County of Northumberland with observations on the means of its improvement* stated that "There never was an Agricultural Society in this county." They concluded this well-known survey by a reference to "Public Farms," which, they urged, would if conducted by proper persons in every county "tend more towards the perfection of Agriculture in all its branches, than any other measure that has ever been suggested." It seems a fair deduction, therefore, to attribute the plan for Northumberland in some if not large measure to George Culley himself who farmed extensively at that time in the north of Northumberland.

The plan is divided into two parts. "1st. The Nature and Constitution of Agricultural Societies; and 2ndly, the Nature and Constitution of the proposed Agricultural Society, and the Plan for conducting the Experimental Farm." In the second part the leading objects of investigation were defined as follows:

What is the best mode of cultivating Arable Land?

What is the best system for the management of Grass Land?

What are the most useful Implements of Husbandry?

What are the most profitable Breeds of Animals?

What is the best plan for rendering waste or barren Land productive?

These and other matters of prime agricultural importance were elaborated in the plan. It was proposed to secure a farm of from 220 to 440 acres of arable land and from 50 to 300 acres of waste land "according to the amount of subscriptions on which to try the various necessary experiments." It was also proposed to raise the sum of from "2000 £ to 3500 £" by forming a Joint Stock Company through such shares as may be agreed upon. "His Grace the Duke of Northumberland whose zeal in the cause and great property in the county entitle him to every mark of respect to be President of the Society." A Committee of management was to be formed and "As the whole success of the plan must depend on the choice of Manager, too much attention cannot be paid to this important particular." The farm was to be leased for at least a term of fourteen years. Then follows a complete list of the proposed equipment, i.e. live and dead stock.

It is interesting to note that five different breeds of cattle were to be tried: the Short-horned, the Long-horned, the Devonshire, the Galloway, the Kyloe or Highland Scots. The sheep included 10 Dishley ewes at £5 each, 10 South Down ewes at £2 each, 10 Cheviot ewes at £1 10s. each, 10 Heath ewes at £1 10s. each; so it is evident Bakewell's Dishley sheep still held the field. Cleveland, Clydesdale, and Suffolk horses are listed to be purchased at £54 a pair. Pigs were to consist of two of each of the following breeds:

"The large white kind, Berkshire, Chinese, and South Sea."

The cropping was also fully set out. It included turnips and ruta baga (the original name for the swede, hence the term, still applied in Scotland, "bagies"). "Seeds" are listed, including white clover, which would be the cultivated form, with chicory, ribgrass, burnet, rye-grass, red clover, etc.

The various experiments to be tried under the heading of "The Waste Land Department" were listed in the following terms:

1. Liming the Surface.
2. Ploughing merely, and sowing with grass-seeds.
3. Ploughing and Liming.
4. Paring, Burning, and Liming.
5. Paring, Burning, Ploughing, and Liming.
6. Paring, Burning, Ploughing, Liming Dunging or Marling.
7. Experiments with Turnips, Kale, Oats, Rye, etc.

One of the most interesting portions of the document, headed "Conclusion", is given here, excluding the final seven resolutions for implementing the Plan.

CONCLUSION

"Before concluding this Report, the Committee beg leave to submit the following observations respecting the expediency of resolving to carry the preceeding Plan into immediate execution, if, after being thoroughly weighed, improved upon, and corrected, it should be fortunate enough to meet the approbation of the County of Northumberland.

"There are many advantages in its favour at present, which cannot always be depended upon. Not only several of the greatest proprietors in the county, but also many of the most intelligent Farmers in it, whose assistance is so particularly material, have come forward with a degree of liberality and spirit which does them infinite credit. If once, however, that zeal is suffered to fall off, it is impossible to say whether it can again be revived to equal advantage.

"2d. The burdens to which landed proprietors are now subject, render it indispensibly necessary that they should promote the improvement of their property as much as possible, by bringing the knowledge of Agriculture to perfection; much improvement may be effected in a short space of time, in consequence of which both the Farmer and the Landlord, in proportion to their respective interests, must be benefited.

"3d. Nothing but Agricultural Improvements can enable Great Britain to surmount its present difficulties. The effects of the scarcity it lately experienced, it has hardly yet recovered; and were another to take place soon, to the same extent, (which without Agricultural Improvements may be safe) it is impossible to answer for the consequences. Whereas, did we make the most of our soil, we might enrich ourselves by exporting the surplus of our Agricultural productions, the most beneficial source that it is possible for a nation of commercial oppulence to possess. On the whole, the Committee beg leave to submit the following Resolutions to the consideration of the Landed Interest of the County."

NOTES ON CONTRIBUTORS

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Compiled by JOAN THIRSK

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Letters to the Editor

INFORMATION WANTED

SIR,—Can any of your readers supply information about a print made *c.* 1840 showing a Mr Valentine Barford with three sheep. The inscription says the print was made by subscribers in honour of his services in conserving the breed of Leicestershire sheep. I should be glad to learn who this man was, when he lived, and where.

D. T-D. CLARKE
Keeper of Antiquities
City of Leicester Museum and Art Gallery, New Walk, Leicester.

ALLOY IN LIVESTOCK

SIR,—Like Colonel Wyndham, I have come across a reference to 'alloy'. This occurs in M. M. Milburn's 'Farming of the North Riding of Yorkshire' in Vol. IX Jour. R.A.S.E.: "As the dairies and grass began to disappear, the distinctive breed has given way, and the celebrated breed of the banks of the Tees, the *short horns*, are spreading with more or less purity, and a greater or lesser degree of alloy —spread by the excellent landlords who, patronizing breeding themselves by purchasing the stock of the first and most judicious breeders, have allowed their tenants the free use of these superior animals."

Used in this context, alloy appears to refer to the degree of impurity in the animals' breeding.

W. HARWOOD LONG
40 *University Road, Leeds*, 2.

ANCIENT IRISH CATTLE

SIR,—Mr J. O'Loan has drawn attention to references in the Brehon Laws to the physical characteristics of cattle in Ireland in the Dark Ages (A.H.R., VII, p. 67). He cites the reference to "white cows" in the Irish Laws as pointing to the contemporaneous existence of cattle of other colours. The fact that the "white milk" of the animals is referred to in the very same extract, however, indicates how fond the writers of the Irish Laws were of pleonasm. In the light of this the mention of white cows cannot be taken as firm evidence of varieties in colour.

A further point of interest is the cited reference to "horned cows" and the inference that polled cattle must have been known in those days. Quite apart from what has been said above, there is good reason to doubt this. References to horned cattle are quite common in the court rolls of manors in northern England, particularly when the carrying capacity of the commons is being defined. In a number of contexts, moreover, it is clear that the term "horned" is used to distinguish mature cattle from the followers—calves and young stirks.

S. R. EYRE
Department of Geography, The University, Leeds, 2.

REPORT ON COMMON LAND

SIR,—In her review of the *Report of the Royal Commission on Common Land* Miss Dorothy Sylvester suggests that it is "likely to remain a standard work on the subject for many years to come."

While agreeing in general with that assessment I would like, nevertheless, to draw your attention to the fact that some of the Welsh material is inaccurate. Perhaps you will allow me to give just one important example. Paragraph 47 of Appendix 2 (p. 162) opens with the statement that ". . . the principality of Wales (including Monmouthshire) has no act or award relating to open fields . . ." But even the incomplete *Great Enclosures of Common Lands in Wales* lists two such acts—Llyswen and Bronllys (p. 55)—while several more have been omitted or wrongly described by Ivor Bowen. In fact an *inspection* of the awards would have revealed quite a different picture from that given in the *Report*.

T. I. JEFFREYS JONES
Llys Branwen, Harlech, Merioneth.

'THE FEATE OF GARDENYNG'

SIR,—I am at present engaged in editing Trinity College, Cambridge, MS. o.9.38. In the December 1936 issue of *My Garden*, Vol. IX, pp. 519–23, an article was published by W. L. Carter on the poem 'The Feate of Gardenyng' by one John Gardener, which occurs on folio 18v–20v of this manuscript. It had been edited by the Hon. Alicia Amherst and published in *Archaeologia*, Vol. LIV, 1894. I have been unable to trace any further articles or correspondence which followed from this or any other information relating to this subject. At one point in his article Mr Carter refers to the section in the poem on flowers and says with reference to flower names that "further investigation is being made into cases of doubtful identity." I have been unable so far to trace whether this further investigation took place and whether anything was published on it. I should be glad to hear from anybody who knows of any further reference to the poem or to Mr Carter's further investigation.

A. G. RIGG

Pembroke College, Oxford.

HISTORY OF IRRIGATION

SIR,—I am gathering information on the history of irrigation and ancient irrigation practices in this country. Although I am primarily interested in the irrigation of vegetable crops, this cannot be separated easily from the irrigation of farm crops in a historical review. I would be pleased to hear from anyone working on the history of farm irrigation and would also be grateful for any information I could obtain from any source on this subject.

P. J. SALTER

National Vegetable Research Station, Wellesbourne, Warwick.

Notes and Comments

THE BRITISH AGRICULTURAL HISTORY SOCIETY

The joint winter conference with the Association of Agriculture was held on Saturday, 5 December, in the University of London Institute of Education. The new President of the Society, Sir Keith Murray, took the chair.

Sudden illness prevented Mr W. B. Mercer, formerly Provincial Director of the National Agricultural Advisory Service, West Midland Province, from giving his lecture on The Development of Agricultural Education and Advisory Services. His place was nobly taken at short notice by Mr T. W. Fletcher of the Department of Agricultural Economics, Manchester University, who gave a paper on Lancashire Livestock Farming in the Great Depression. In the afternoon Mr O. R. McGregor, Reader in Social Institutions, University of London, gave a paper on Free Trade in Land in the Victorian Period, at the conclusion of which Miss Edith Whetham, Gilbey Lecturer in the History and Economics of Agriculture, University of Cambridge, and Fellow of Newnham College, discussed and demonstrated some Cambridgeshire tithe maps of 1836–90.

SCOTTISH CONFERENCE

The first Scottish conference of the Society was held jointly with the School of Scottish Studies on 26 September 1959, at the Department of Prehistoric Archaeology, Edinburgh University. It was well attended and it was the general opinion of those present that regional conferences should be held in Scotland from time to time.

The conference began with a panel discussion on the Problems of Scottish Agrarian History before 1700, which was led by Dr Gordon Donaldson, Reader in Scottish History, Edinburgh University, and Professor Stuart Piggott, Head of the Department of

(*continued on page* 56)

Book Reviews

V. BONHAM-CARTER, *Dartington Hall: the history of an experiment*. Phoenix House, 1958. 224 pp., illus. 30s.

The varied human activities which have from time to time comprised the Dartington Hall community (the unscientific use of the word "experiment" in the title and the blurb is to be deplored, as it is of the nature of experiments that they can be repeated indefinitely if necessary) are well chronicled in this attractively produced and persuasive book. In 1924 Mr and Mrs Elmhirst bought the somewhat dilapidated remains of the ancient estate of Dartington in Devon, then comprising 820 acres, and proceeded not merely to reorganize, extend, and modernize it agriculturally, but also to make it socially and culturally a kind of Owenite colony without the peculiar doctrines associated with Robert Owen. Dartington possessed other advantages over Orbiston, Ralahine, and Harmony Hall. Whereas the Owenite experiments usually suffered from inadequate capital resources, Mrs Elmhirst, being the daughter of one American banker and the widow of a second, was well able to finance not only those communal activities which could hardly be expected to produce a profit, but also those which brought in either inadequate profits or losses. By 1958 the estate had expanded to about 4,000 acres. Unfortunately few details about the finances of the estate are given, although W. E. Hiley's *Examinations* of the financial accounts of Dartington Woodlands Ltd from 1947 to 1955 are noted as being available to any interested researcher. There can be no doubt, however, that the fulfilment of the Elmhirsts' policy of rural reconstruction and enlightened landlordism has been rendered easier by the fact that they purchased most of the estate in a period of agricultural depression and that they have benefited greatly from the revival in British agriculture which has taken place since the 1930's. Nevertheless it should not be forgotten that the research carried out and the rehabilitation techniques employed at Dartington itself have contributed to this revival and to the growth of world interest in the problems of scientific agriculture, symbolized, for example, by the International Conference of Agricultural Economists. Nearly one-third of the book is taken up by an account of the Dartington Hall school by W. B. Curry, an account redolent of the libertarian idealism of the inter-war period and remarkable for its bland assumptions that boarding schools are best and that the State system of education is almost beneath contempt.

W. H. CHALONER

V. C. FOWKE, *The National Policy and the Wheat Economy*. University of Toronto Press. London: Oxford University Press, 1957. viii+312 pp. 45s.

This is the seventh study to be published under the sponsorship of the Canadian Social Science Research Council in the series on 'Social Credit in Alberta: Its background and development'.

Professor Fowke sets out the results of many years of devoted, painstaking research, and the book can be highly recommended to all careful students of Canadian history. It can also be recommended as useful in extending the horizons and sharpening the judgements of many of those who are now concerned with agricultural development in the poorer countries. Canada's circumstances have been unique in many respects and unlikely to be repeated, but within them basic socio-economic interests and conflicts have been similar to those in many other areas now developing agricultural surpluses.

Professor Fowke's general thesis is that the complex of policies directed towards the creation of a transcontinental Canadian nation required effective occupation of the prairies. This, in turn, required capital and so led to the provision of a "frontier of investment opportunity" without which the

earlier political and territorial dreams would have proved empty. But by 1930 the first phase of "national policy" was about concluded. Titles had been granted by Government to some 120 million acres of land, 58 million of them under free-homestead or grant systems, and the rest by or for sale. That more might well have been granted as free-homestead land is commonly argued, but Professor Fowke emphasizes the difficulties of settlers on free-homestead lands. Initial claims on 99 million acres were made by such settlers, but four out of ten of these claims could not be sustained over the three-year period as required for the granting of full title. And on the 58 million acres of homestead lands on which full titles were granted human sufferings were often severe, not only because of heavy debts and major changes in the money value of farm products, but also because there had been "failure to base the settlement of the prairies on anything in the way of land or climatic surveys." Settlement on the basis of 160-acre farms was also a serious handicap, although the mixture of "free homestead" and "for-sale" arrangements contributed to the "enlargement . . . so essential to sound development of the wheat economy."

Professor Fowke also emphasizes "persistent disregard of the competitive inferiority of agriculture within the price system." He feels impelled to recognize the effectiveness of the concept of parity price in United States farm policy as a unifying force of "great tenacity and a substantial measure of consistency." And he doubts whether Canadian agricultural policy has now any real sense of direction because it lacks "theoretical or conceptual content." But the worst difficulties arising from imperfect competition at the point of first purchase of grains from farmers appear to have been overcome in Canada, and the ablest analysts of U.S. agricultural policies now have weighty arguments against them, not least that they tend to retard the outflow of people from farming. The "competitive inferiority of agriculture" cannot in the long run be removed by State pricing of products, but it could be minimized by encouraging, through education, training, and appropriate credit arrangements, a greater mobility of farmers and farm workers out of farming, and particularly out of areas with chancy rainfall or infertile soils.

The style is almost throughout clear and attractive, and the index and bibliography are excellent.

J. R. RAEBURN

NORMAN MCCORD, *The Anti-Corn Law League, 1838–1846*. George Allen & Unwin Ltd, 1958. 226 pp. 25s.

The Victorians wrote copious memoranda and innumerable letters about the events in which they were participants, and it will be a long time before historians will have exhausted their searches therein. The author of this scholarly monograph on The Anti-Corn League has drawn on papers—notably those of George Wilson, President of the League for most of its life—not previously used.

The main interest of the book is as a study in political history, for Dr McCord is concerned with giving a full and absorbing account of the origins, personalities, structure, and tactics of "one of the first examples of a recurring feature of modern political life, the highly organized political pressure group with its centralized administration and its formidable propaganda apparatus."

This emphasis on the political has, understandably enough, resulted in little mention being made of the contemporary economic background. All the same, the agricultural historian will find some matters of specific interest, more especially the references to the League's attempt to convert the agricultural interests. There were two phases to this attempt.

First, in 1839, when the "Leaguers" thought they could win on the plane of economic and social argument, a series of lecturing tours in the agricultural districts was "designed to bring the farmers to realize that they could be better off without the Corn Laws." The lecturers made no impression, and were often given very rough receptions. For example, "the impudent James Acland

was badly manhandled at Saxmundham . . . and at Arundel one farmer provided a bushel of corn to anyone throwing the lecturer into the river." The costly failure of this first attempt to woo the farmers by economic argument was not due only to the farmers' obstinate refusal "to see the League as an association of their true friends," it was also due to the poor quality of the paid agents entrusted with the work.

In the second determined attempt, which began in 1843, it was the leaders and not the agents who took to the stumps to wean the farmers from protection. Not only did they strive to prove that the Corn Laws were injurious to agriculture, they also sought to drive a wedge between farmer and landlord. Cobden, for example, drew attention to "the broad distinction which exists between the landed and the agricultural interest," while Bright aimed his shafts at the hated Game Laws. But it was all to little avail, for "the English farmers declined to see in an organization dominated by the manufacturing interest a better friend to agriculture than the old leaders of the landed interest."

Two powerful weapons in the armoury of the League were the manipulation of electoral rolls and the circulation of propaganda tracts. Both have an interest to the agricultural historian.

As one means of increasing their electoral strength the League actively helped in the buying of the freehold qualification "which made a man equal at the polls to the greatest territorial magnate in the county." One example given by Dr McCord has a distinct agricultural flavour. In October 1845 Cobden and Bright seriously considered buying at a price of about £60,000 to £80,000 a landed estate in Bucks with a view to creating 1,000 county votes. It was to be put out, however, that the purpose was "to establish a model farm with a model lease, model offices and model cottages with gardens, to prove our faith in our principles that the soil is as capable of as great a profitable development as manufacturers." What a pity that nothing seems to have come of this pioneering idea in land settlement.

In the war of pamphlets which reached "millions in numbers and tons in weight" a great deal of effort was expended on the "enlightenment" of the rural mind. In keeping with the League's usual practice of employing experts, the team of pamphleteers included several farmers who wrote on agriculture and supplied the orators with ammunition. In a letter to one of them Cobden admits that he was "profoundly ignorant of the practices of agriculture, all I know I learn from you and others." Alexander Sommerville was an influential scribe, but he, at least, wished to keep his connection with the League a secret, and, signing his articles as by 'Whistler at the Plough', he preferred to pose as "a disinterested observer of the rural scene."

One would have liked to hear more about the League's supporters amongst the farmers. Is it too much to hope that some agricultural historian will soon do for agriculture what Miss Lucy Brown has done for the secret supporters of the League at the Board of Trade in her book which has appeared since the publication of Dr McCord's admirable study?

EDGAR THOMAS

R. P. DORE, *Land Reform in Japan*. Published for the Royal Institute of International Affairs by Oxford University Press, 1959. xviii + 510 pp. 55s.

The author is a Canadian university teacher who acquired a knowledge of the Japanese language and then spent a year, not among officials and professors, but actually living in Japanese villages. A reviewer whose knowledge of Japan is confined to that obtained from reading economic and statistical documents, and a two weeks' visit, would indeed require considerable hardihood to criticize him. After searching the text in an *exigeant* manner for economic or statistical errors, and finding none, the reviewer then considered himself entitled to sit back and thoroughly enjoy the rest of the book, which gives a most vivid and down-to-earth account of what Japanese villagers are really like, how they organize their work, their local politics,

their many virtues, and their very human failings.

The opening chapter gives a tantalizingly brief account of a land nationalization proposal which was enacted, but which soon broke down, in the seventh century A.D. After some centuries of bloody baronial wars Japan, about 1600, entered the peaceful, but rigid and unprogressive, Tokugawa Period which lasted until the Revolution of 1868. Tokugawa society showed many of the characteristics—in a more extreme form—of Bourbon France. Some half of the peasants' crops was taken in rents, nominally due to the Emperor, but in fact used to support the nobility and a great number of functionless *samurai*. There was some coinage, but rice formed a *de facto* currency for most transactions. Even under these rigid conditions, however, a considerable urban population grew up. Cunning rice merchants acted as money-lenders, and many of them, like their European counterparts, eventually bought or married their way into noble families.

Tokugawa Japan is interesting enough, but modern Japan, with which this book is principally concerned, really does demand the attention of historians. Nowhere in the world is there such an interesting 'laboratory' of rapid economic growth. Japan at the time of the Meiji Revolution of 1868 was far more backward, illiterate, and isolated than Russia. The Emperor Meiji, a statesman of genius, disbanded the *samurai* and told them to go and do some useful work, and established an Army under his direct control. To pay for the modernization of the country he established land taxes, taking approximately 35 per cent of the crop (reduced to about 25 per cent in 1878).

But it did not occur to this otherwise far-seeing statesman that a silver currency, under world trading conditions of the late nineteenth century, might rapidly lose its purchasing power. Land taxes had been fixed in money. The real return from them steadily fell. The public revenues were supplemented by other forms of taxation. With the fall in the real burden of land tax, the price of land rose, and it became attractive to urban investors. The private agricultural landowners of Japan were thus a comparatively recent development, not the descendants of the ancient feudal nobility. Much of the land remained peasant-owned throughout.

Meiji taught his simple people that they owed him three duties, namely to pay their taxes, to educate their children, and to serve in the Army. The author argues very trenchantly that these have been the real equalizing forces in Japanese life. The suffrage became universal in 1925; but this was of secondary importance compared with these other factors. Unlike his English counterpart, the son of a Japanese landowning family studied at the village school (primary education was made universal as early as 1886) and served in the ranks in the Army. When General MacArthur directed the Japanese Government to introduce legislation for buying out the landowners in 1946, public opinion was quite prepared for the change—though most Japanese seem to have thought, as does the author, that the compensation should have been reasonable and not nugatory.

The book is full of fascinating glimpses of Japanese rural life. Many nineteenth-century landlords were as zealous as our own Victorians to improve the moral tone of their villages. One landlord told his tenants that they ought to start work at 3 a.m. during the summer, got up and walked around the village to see how far his intructions were obeyed, and placed a signboard bearing the legend "Commendable Household" outside the houses of the obedient, until the whole village was shamed into conformity.

But apart from such efforts, the landlords did not have a good record for encouraging agricultural progress; on the whole they discouraged the use of chemical fertilizers, which the independent peasants favoured.

Most of the agricultural work in Japan, to this day, is done with hand tools. Horses and draught oxen are rare; and indeed would be of doubtful economic value in Japan's tiny rice-plots. The hand-tool cultivator never-

theless makes intelligent use of fertilizers, insecticides, weed killers, etc. and now small five-h.p. tractors, worked by contractors, are rapidly coming into use.

During the years of grave agricultural impoverishment in the 1930's the Nohon-Shugi (literally "Agriculture-is-the-base") Movement sprang up rapidly, teaching that agriculture, pursued in the traditional manner, was the base alike of wealth and of virtue. This movement had much following among army officers, and must carry some of the blame for the insurrection of 1936 (when the Prime Minister was murdered), and also for the Army's aggressive external policy.

The later chapters give a full, frank, and earthy account of how democratic politics work in a Japanese village. Contributions to party funds in return for services rendered, and 'jobs for the boys', are not phenomena confined to Western democracies. But the author much prefers modern Japan, with all its faults, to Japan as it was a generation ago.

COLIN CLARK

PETER MICHELSEN, *Danish Wheel Ploughs, an illustrated catalogue*. International Secretariat for Research on the History of Agricultural Implements, Copenhagen, 1959. No price stated.

This is a catalogue which provides a photograph of all known specimens of wheel ploughs in Danish museums. It is the result of a survey carried out by Mr Michelsen to provide in a readily available form source material which may be of use to research workers. In addition to the photographs, which number 192, there is a map showing the distribution of the ploughs throughout Denmark. The terminology adopted follows closely that used by F. G. Payne in 'The Plough in Ancient Britain', *Archaeological Journal*, 1947, and Branimir Bratanić, 'On the Antiquity of the One-Sided Plough in Europe', *Laos*, II, 1952. It is a welcome attempt to provide a catalogue, which as a result of standardized terminology can be used by workers in other countries and which has the added attraction of being printed in English.

H. L. GRAY, *English Field Systems*. The Merlin Press, 112 Whitfield Street, London, W.1, 1959. x+568 pp. 63s.

Although a standard work, containing much material of permanent value, Gray's book has been out of print for some years. A new edition is therefore welcome, but as agrarian history has not stood still since 1915, it would have been well if some competent scholar had been asked to state briefly where Gray's findings have been modified by later research. This has not been done. We have here a photographic reprint of the 1915 edition, with no new matter except a copyright notice (in which there is a glaring misprint) on the back of the title-page. It is bound in a quite astonishingly repellent black cloth, on which, and on the jacket, the title of the book is printed incorrectly.

H. P. R. FINBERG

W. G. HOSKINS, *Local History in England*. Longmans, 1959. x+208 pp., illus. 21s.

Dr Hoskins and his publications need no introduction to readers of this journal who will know that this book will be both interesting and useful. Its main purpose is to help the amateur local historian. Methods of work, the publication of results, and the differences between local history and antiquarianism are discussed, especially in chapters entitled 'The Local Historian Today' and 'Writing and Publishing'. Some neglected fields of investigation are also considered, in particular the local community as an organic entity, and fieldwork in both rural and urban areas. These give rise to chapters on The Old Community, Parish, Manor, and Land, Church, Chapel, and School, the Topography of Towns, their Social and Economic History, Fieldwork on Landscape and Buildings, and Health, Disease, and Population. The author is often original and always informative, practical, and stimulating.

Few criticisms are provoked. Selective in content, the book is not meant to provide a comprehensive introduction to sources, but guide books (p. 26), civil parish records (c. 4), Land Utilisation Survey *Reports* (p. 59), and

Geological Survey *Memoirs* might have been mentioned, and the value of museum material should have been stressed. 'English Local Historians' (c. 2) is most interesting but, except for the last section, seems out of place. Advice on the technique of note-making would have been helpful. Finally, if we remember Dr Hoskins's own criteria, is Nathan's *Annals of West Coker* really an example to be followed (p. 170)?

The minor nature of these criticisms speaks for itself. This is a most valuable book. Leland was driven mad by his studies. Certainly careful reading of *Local History in England* should save both amateur and professional investigators, as well as their readers, from this fate.

ROBERT DOUCH

JAMES R. BARCLAY and ALEXANDER KEITH, *The Aberdeen-Angus Breed—a History*. The Aberdeen-Angus Cattle Society, 1958. xvi+744 pp., illus. No price stated.

This is less a straightforward history of the breed than a detailed and valuable collection of facts and information about it. It is fifty years since a history of the Aberdeen-Angus last appeared. The present work was begun by the late James Barclay, who was for thirty-six years secretary of the Society. It has been completed by Alexander Keith who succeeded him as secretary.

Much of the book is devoted to summaries of show successes at home and abroad over the years; but there are also useful chapters on the early pioneers and notable early herds. The book concludes with a survey of the export trade which has been of such importance to Angus breeders, and notes on the more important modern herds. It is well illustrated and will provide a most useful source-book for all those interested not only in Angus history, but in the history of British livestock.

R. TROW-SMITH, *A History of British Livestock Husbandry, 1700–1900*. Routledge and Kegan Paul, 1959. x+352 pp., illus. 40s.

In this volume Mr Trow-Smith contributes a sequel to his earlier *History of British Livestock Husbandry to 1700* and thus brings the story up to the end of the nineteenth century. On the completion of this work he deserves congratulations, for we at last possess a valuable, modern, and well written work on the development of British livestock. This volume provides a worthy successor to the first and may even find a wider market, as it deals with a period of more immediate interest to those concerned with modern livestock.

A lot of what Mr Trow-Smith has to say will already be familiar to historians as he draws widely on published sources, but it is none the less valuable for this, particularly as he has gathered together contemporary and modern material on many controversies and re-valued them. The stature of Bakewell, for example, does not diminish in his account, but at the same time the contribution of lesser men, such as Webster of Canley, who have never had their due, is made clearer. There is a useful analysis, too, of the spread and importance of winter feed crops in the eighteenth century.

The author is at his best when telling the story of the development of the breeds. When he moves to other subjects he sometimes proves weaker. The nine lines devoted to transhumance contribute little, the material on marketing could have been strengthened, the whole subject of horses gets rather slight treatment, and the three pages on the veterinary revolution in the nineteenth century merely leave the reader anxious for more. It is perhaps also a valid conclusion to say that as the sources become more prolific in the late nineteenth century, the result seems less satisfactory, but it would be wrong to seem ungrateful for the great task which Mr Trow-Smith has undertaken. The two volumes now form a work which will be a standard one for many years to come.

J. W. Y. HIGGS

REGINALD LENNARD, *Rural England, 1086–1135. A Study of Social and Agrarian Conditions*. Oxford, Clarendon Press, 1959. viii+410 pp. 45s.

This learned and original work is described by the author, formerly Reader in Economic

History in the university of Oxford, as "an attempt to describe the economic conditions of rural life in England during the Norman period." It is a study not of agricultural techniques, for which the evidence is wanting, but of agrarian history, of the great feudal estates and the holdings of the peasants, of the methods by which the land was exploited, and of the various classes of men who dwelt on and worked the land. The book deals with five major topics: the make-up and distribution of the estates of the Church and of the greater feudal lords; the management of these estates; the relation between manor and village; the economic and social condition of the peasants; and, finally, the parish churches, their endowments and their clergy. The evidence, largely derived from Domesday and the surveys of the next half-century, is complex and often confusing, and, as the author insists, does not lend itself to easy generalization. It is, indeed, a major purpose of the present work to re-examine and revise the conclusions of earlier workers in this same field.

The England which the Normans conquered was already an "old country," a country long settled. It was also, after the Norman occupation, a country of vast agricultural estates, in which less than 200 tenants-in-chief held rather more than half the total value of the land. The manors of which these estates were composed were, for the most part, widely dispersed and of very varying value. How then were they exploited? Mr Lennard shows that farming-out of estates was a much more common practice than has hitherto been suspected, that many manors described as "in demesne" were in fact put to farm, that most farms were held on leases for cash payments, and that stock and land leases were frequent. The obligations of the lessees, the conditions of tenure, and the relations between the farmers and the manorial tenants are discussed in detail.

Domesday Book was compiled on the assumption that the country was more or less fully manorialized. The implied identity between manor and village has long been known to be an illusion, and the author shows that the 'normal' village is a conception closer to reality than the 'typical' manor, and that the contrast between the relatively unmanorialized Danelaw and some parts of the north, and the rest of the country, is not to be exaggerated. A wide variety of tenurial arrangements was matched by considerable variety in the agrarian economy. If agriculture held pride of place, mining and milling, pig and sheep farming, and other minor industries played an important part in the national economy. The same wide variety is again apparent in the social conditions of the peasants. Men who were, from the legal point of view, of the same status, differed greatly in their economic conditions, and, as the author insists, the peasants of England did not form a single class. Local and regional differences, at times of a bewildering complexity, once again emphasize the danger for the historian of accepting at their face value the classifications of the Domesday commissioners.

The student of English ecclesiastical history will be grateful to Mr Lennard for a long and admirable discussion of the parish churches and clergy of Norman England, and in particular for his account of the decline and disintegration of the minsters of the late Old English period. On this, as on so many other matters, his work is clearly destined to be for many years to come a standard authority, and it is much to be desired that later editions will be supplied with a rather more adequate index.

GERARD CULKIN

HILDA GRIEVE, *The Great Tide*. xii+884 pp., illus. Essex County Council, 1959. 30s.

Presumably the purpose of the Essex County Council in publishing this book was to have some record for the benefit of future generations lest such a disaster as the tidal flood of 1953 should recur. Fortunately they entrusted the work to Miss Hilda Grieve, and they are to be congratulated on their judgement. It is not too much to say that she has produced a masterpiece. This is not merely an account of an administrative achievement. We are given an accurate history of the drainage system in Essex and an account of the meteoro-

logical and oceanic conditions favourable to tidal surges. This account is not only accurate but interestingly written. As for the description of the actual flood as it progressed from Harwich to Barking Creek, this is not only interesting but exciting.

The disaster was not altogether unexpected, but certainly it was greater than those acquainted with tidal conditions would have supposed. It is clear from the account given that much able and devoted work was done by the local authorities, and it is fitting that special mention should be made of the Local Authority principally concerned, the Essex Rivers Board, and in particular to its vice-chairman who was in charge of the operations, and its clerk and engineer.

J. E. MAHER

BASIL E. CRACKNELL, *Canvey Island: The History of a Marshland Community*. Department of English Local History, University of Leicester, Occasional Paper No. 12. Leicester: The University Press, 1959. 48 pp., illus. 12s.

On the night of 31 January 1953 a large area of the east coast of England suffered severe inundation. Amongst the more seriously flooded areas was Canvey Island on the Essex shore of the Thames estuary. This was no new experience for the island. The first phase of its history in the Romano-British period, during which it was occupied by a community of salt-makers, was brought to an end by a great submergence towards the end of the second century. In the middle ages it produced sheep and cheese, but this settlement of shepherds was threatened towards the end of the sixteenth century by the sea. Accordingly Dutch engineers and workmen were called in to strengthen the island's defences. When this work was done a number of the Dutch workmen remained as farmers, forming a Netherlandish community. They stayed till the end of the seventeenth century and then unaccountably disappeared. Their place was taken by English farmers who flourished till they became victims of the agricultural depression of the late nineteenth century. In 1881 and in 1897 the sea walls were breached again. In recent years the island has been settled by an urban community, who have now to struggle not only against the sea but also against the threatening tide of industrialism. In this prize essay Dr Cracknell has outlined the story neatly and succinctly, though those wishing to pursue the subject further would have welcomed more bibliographical assistance. Once again the John Nichols Prize has evoked a most useful contribution to local history.

W. E. MINCHINTON

A. K. ASTBURY, *The Black Fens*. Golden Head Press, 1958. xii+218 pp., illus. 42s.

This is a comprehensive account of the fens of the Isle of Ely. The author has devoted much study to the subject and it is clear from the acknowledgements in the preface that he has consulted those best able to give him information.

The book is not, as one might expect, a mere account of the drainage system. Much emphasis has been placed on what is the most difficult problem of peat sinkage, and there is an interesting account of the difficulties of building on a peat foundation. The passage on Rodhams and the Old Fen Meres throws light on a less well-known aspect of the subject. Indeed it tends to make one regret the success of fen drainage, as in the case of Winchelsea Mere. There is a considerable discussion on the old course of the rivers and on work carried out in Roman times. This, while bound to be speculative, considerably adds to the interest of the book.

J. E. MAHER

HANS-HELMUT WÄCHTER, *Ostpreussische Domänenvorwerke im 16. und 17. Jahrhundert*, Beiheft zum Jahrbuch der Albertus Universität, Königsberg/Pr., XIX. Holzner Verlag, Würzburg, 1958. 186+xxiv pp. DM 12.

This is a study of farming and administration in the sixteenth and seventeenth centuries on a group of farms belonging to the Teutonic Knights in East Prussia. It was presented by the author as a thesis at the Georg-August

University, Göttingen, in 1957 under the supervision of Professor W. Abel, already well known to English readers for his studies of the agrarian depression in the later Middle Ages.

East Prussia was first colonized in the thirteenth century by the Teutonic Knights, but by the fifteenth century the great estates carved out in the first period of settlement had been broken down into smaller and smaller units until the country consisted of small peasant farms, many of which had been completely abandoned as a result of the depression. Rising prosperity in the sixteenth century caused the Teutonic Knights to take into their own hands again the farms which they had let on lease in the previous century, and this new policy gave rise to a collection of farm records on which Dr Wächter's work is based. They enable him to estimate the numbers of stock on the farms of the Order (rising to a peak in the early years of the seventeenth century and declining thereafter), and to calculate seeding rates and the yield of crops. Sharp fluctuations in yields from year to year he attributes to the uncertain labour supply and secondly to the varying efficiency with which the farms were administered at different times.

All farms were organized for the production of grain for the market, rye being the chief crop, barley second in importance, and oats third. In the sixteenth century East Prussia became the corn supplier of Holland, England, and Germany. And as demand increased, so cattle and sheep numbers were increased in order to maintain the fertility of the fields. But the weakness of farm organization lay in the uncertainty of the labour supply. For whereas in England by this time nearly all farm labour was rendered by wage workers, the farms of the Teutonic Knights still depended to a large extent on the labour services of the peasantry. Shepherds, hop cultivators, and some other skilled workers were engaged on special contracts, sharing their expenses and profits with their employers, and some work was done by cottagers (Gärtner) who, in return for a house and some land, undertook a certain number of days' work on the farm each year and were paid wages for additional work. But labour services were indispensable, and when the farming boom of the sixteenth century gave way to depression in the seventeenth, landlords who attempted to increase their demands for services from the peasantry found themselves clutching in distress at a straw. The peasants, already hard pressed by bad harvest, plague, and deepening poverty, fled to Poland or to the towns. Dr Wächter's story ends, therefore, on the same melancholy note on which it begins. In 1508 over 45 per cent of the holdings in three districts near Königsberg were deserted. At the end of the seventeenth century 55 per cent of the peasant holdings on twenty-eight estates of the Order were empty.

Dr Wächter makes much of the effects of war and associated bad harvests and plague in accounting for the seventeenth-century depression in East Prussia. But he brings forward no evidence to show their precise effect upon the individual farms which he has studied. The seventeenth-century depression was not an exclusively Prussian phenomenon. It seems to have affected the whole of Europe in varying degrees, as war did not. Hence, scholars interested in economic trends in the seventeenth century will find much in this book to strengthen the argument for a "general check to economic development" in this period.

JOAN THIRSK

Books Received

V. Bonham-Carter, *Farming the Land.* Routledge and Kegan Paul, 1959. 162 pp., illus. 15s.

N. M. Druzhinin, V. K. Sivkov, V. K. Yatsunskii, and A. M. Anfimov (eds.), *Material on the History of Agriculture and Peasantry of the U.S.S.R.*, Volume III. Academy of Sciences of the U.S.S.R., Institute of History, Moscow, 1959. 494 pp. 19p. 30k.

R. H. Hancock, *The Rôle of the Bracero in the Economic and Cultural Dynamics of Mexico.* Hispanic American Society, Stanford, California, 1959. 146 pp. No price stated.

A. Harris, *The Open Fields of East Yorkshire.* East Yorkshire Local History Series, No. 9. The East Yorkshire Local History Society, 2 St Martin's Lane, Micklegate, York, 1959. 26 pp. 3s.

Allan Jobson, *An Hour-Glass on the Run.* Michael Joseph, 1959. 184 pp., illus. 18s.

L. S. Prokofjeva, *The Patrimonial Estate in the Seventeenth Century from the Materials of the Spaso-Prilufsky Monastery.* Academy of Sciences of the U.S.S.R., Moscow. 178 pp. 8p. 90k.

M. G. Sergeenko, *Sketches on the Agriculture of Ancient Italy.* Academy of Sciences of the U.S.S.R., Moscow, 1958. 246 pp., illus. 12p. 40k.

Axel Steensberg, *Bønder.* G.E.C. Gads Forlag, Copenhagen. 94 pp., illus. No price stated.

S. I. Volkov, *Peasants of the Estates Cognizable in the Palace Court in Moscow District in the Middle of the Eighteenth Century* (30th to 70th years). Academy of Sciences of the U.S.S.R., Institute of History, Moscow, 1959. 262 pp. 9p. 40k.

N. A. Yegizarova, *Agrarian Crisis by the End of the Nineteenth Century in Russia.* Academy of Sciences of the U.S.S.R., 1959. 192 pp. 7p.

NOTES AND COMMENTS (*continued from page* 46)

Prehistoric Archaeology. Professor Piggott also read a short paper by Mr R. B. K. Stevenson, Keeper of the National Museum of Antiquities of Scotland, who was unfortunately unable to attend. After lunch in the University Union, the afternoon session opened with a paper by Mr Malcolm MacSween on A Geographer's Approach to Agrarian Change in Scotland after 1700, and he was followed by Mr J. A. Symon, who spoke on the Boom and Slump in Scottish Agriculture in the Early Nineteenth Century. The conference concluded with a visit to the School of Scottish Studies during which tea was served.

ARRANGEMENTS FOR BINDING

Messrs Hill & Pavier, of 47 Ouseley Close, Marston, Oxford (telephone number Oxford 49343), have been appointed binders of the Agricultural History Review. They will bind Volumes I–V in one case and Volumes VI and VII in one case. In the future the Society will issue a title-page with every second volume in order that they may be bound in units of two volumes. The case will be green cloth board embossed with 22-carat gold and bearing the words "The Agricultural History Review" at the top and the volume numbers and date at the bottom. There will be a line of gold decoration at the top and bottom. The cost per binding will be 24s. plus postage. Members who wish to take advantage of this arrangement should send their copies of the Review direct to Messrs Hill & Pavier, together with the title-pages.

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